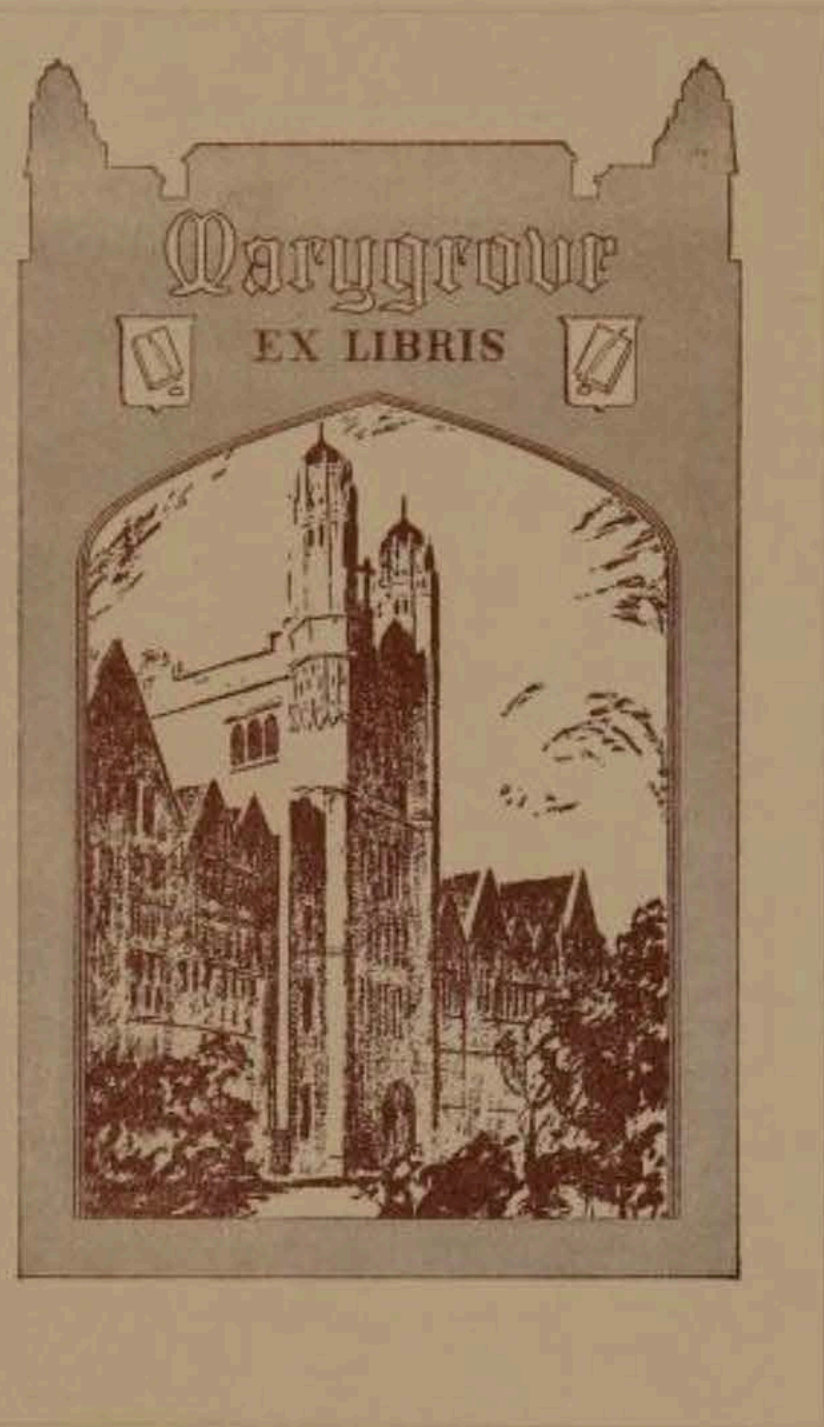


LE CORBUSIER



LE CORBUSIER



LE CORBUSIER

**architect
painter
writer**

Edited by STAMO PAPADAKI

With essays by

JOSEPH HUDNUT — S. GIEDION

FERNAND LEGER — J. L. SERT

JAMES THRALL SOBY

New York • THE MACMILLAN COMPANY • 1948

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First Printing

Printed in the United States of America

Foreword by the Editor

This book is an attempt to bring together some of the most representative work of Le Corbusier in the fields of architecture, urban planning, painting, and writing. We believe that a true estimate of the work of the man may be achieved only through a total picture of his activities. We also believe that the understanding of the common characteristics and the close relationships that exist between the different aspects of Le Corbusier's work will enable us to trace some dominant features: the search for a visual expression acceptable to our contemporary sensibility (paintings, drawings, renderings); the effort to rehabilitate the common object, the useful object, as a legitimate companion of our daily life (early paintings, interior designs and equipment); the return to the human scale as the measure for our productivity in the "mechanical" age (architecture, planning, writing).

Perhaps the logical sequence in presenting Le Corbusier's work would have been: painting, architecture, planning, if it were to illustrate Le Corbusier's consecutive approaches to those fields. For Le Corbusier, painting is an incessant activity; but it was from painting to architecture and from architecture to planning that his creative abilities found their natural trends. We have given precedence to his architectural activities with the understanding that these activities have had the most positive influence on a time which was essentially one of architectural reorientation. The awakening of architectural thinking between the two wars is as apparent as the wide experimentations in the arts of painting and sculpture which dominated the preceding period

and prepared the ground for a new building design. Le Corbusier the architect received from Le Corbusier the painter a generic visual implementation.

In the field of architecture the dwelling unit presents an elementary form of the components of larger social settlements: the regions of intimacy and privacy into which the individual retreats for rest, study or meditation; the common grounds, the spaces for work, the traffic arteries. The problem of a dwelling unit deals with the group and with the individual. It is not therefore a mere ambition for the architect to enter the field of city planning and to understand the components of an urban complex; it is a logical extension of his professional task.

However, urban and regional planning, at present hardly outside the realm of utopia, are subject to criticisms quite similar to those provoked by the "modern" buildings of a quarter century ago. Living in outmoded urban agglomerations, we slowly begin to understand the challenge that faces us. It is in the coming era, the era of new urban patterns, that we will witness the rebirth of regions destroyed through war or dead from obsolescence. We will also witness then the impact of Le Corbusier's thought upon the field of planning, as we already see it upon the architecture of today.

Credit must be given here to Pierre Jeanneret, with whom Le Corbusier signed most of his architectural and planning work (3,189 plans in all) from 1925 to 1940.

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architect



**L'ESPRIT
NOUVEAU**

Le Corbusier and the New Architecture

BY JOSEPH HUDNUT

Not invention, but the use made of invention, is the measure of an architect.

In our time steel has set us free to create in buildings every shape and combination of shapes which may drift into our changing dreams. The old materials—brick, stone and wood—bound our buildings to convention and to geometry, disciplined their forms within strict and established progressions, and imposed upon them a conformity to masterpieces completed, framed, set solidly upon the earth. Our new materials set us free to mold our buildings as a musician molds a symphony. The forms which buildings may assume are limited only by the daring of our imaginations.

The fantasies of our constructions need not then surprise us; we should be surprised rather by their sobriety. These walls of glass, these mighty cantilevers, these interlacing spirals, floating walls, and penetrating cubes of air: are these not the inevitable children of steel? Dull indeed was that mind which, working by calculation, left undiscovered an aesthetic so diverse and meaningful.

Nevertheless we must not mistake these shapes for architecture. An architect may play with them as a child plays with blocks—or as architects once played with domes and peristyles—and yet kindle no spark of that fire which translates mere building into architecture. A thousand new surprises await us in steel and in the unlimited resources of the industries which depend on steel: we must be careful not to make surprise the standard of excellence in an art of design.

No designer is more inventive than Le Corbusier. It has been said of him, and with little exaggeration, that he gave architects a new vocabulary. He freed buildings from weight—the greatest single innovation of modern architecture—and gave us volume as the essential material of our designs. He showed us how to exploit crystalline space and transparent surface, flat roof, suspended wall, asymmetrical plan, and the forms of windows, balconies, ramps and screens which the new structure provokes. His resourcefulness, not in forms merely, but in relationship and pattern, is inexhaustible.

These are brilliant new colors laid upon the palette of architecture; and yet they are of less consequence than the purpose to which they were ultimately to be addressed. Modern architecture is not an art of flat roofs and corner windows, nor of white surfaces, crisp angles, and laconic shadow, nor yet of rational planning and contemporary techniques. These may entertain and serve us, but they are architecture only when they become elements in a language of form.

That Le Corbusier possesses a native virtuosity in the art of sensation will not be denied. Necessity, I think, is a sufficient excuse for that armor; but in any case his

inventions, brilliant as they are and wide in range, could not in themselves explain his influence. His inventions arrested his era, but it is the use he made of these that gives him importance. The provocative and charming patterns that rose from his draughting board would long since have been forgotten—like the fantasies of a World's Fair—had they not attained, beyond their surprise and wit, a harmony more deeply rooted in our minds: if they had not assured us, in the ancient language of constructed form, that this new structure of ours—this steel construction which we thought so angular, harsh, and perverse—may yet have its pattern and proportion and, as eloquently as any other, mirror the heart of humanity.

New movements in architecture usually make their first appearances in the design of individual dwellings. The owner of a house is less restricted on the one hand by commerce, on the other by the traditions of institutions. Here client and architect may freely construct their private heaven, adapting a science of building to their way of life, searching out and exhibiting, like painter or sculptor, an aesthetic of personal preferences, and attempting a synthesis of these. The early houses of Le Corbusier are like the opening phrases of a symphony: they state a theme. The development followed.

The development which embraced almost all of modern architecture could not have followed had not this initial theme captured values beyond those of aesthetic preferences. We are quite mistaken if we interpret Le Corbusier as an artist who carried the experiments of a painter into constructed form. Cubism there is; but cubism could have survived in one area no longer than in another. If Le Corbusier had not progressed beyond cubism, his work would not long claim our attention. It would have been, like *art nouveau*, only another in the long sequence of "styles."

No critics have misunderstood—or miscalculated—more grievously than those who bracketed this early work of Le Corbusier within an "international style." An infinity of confusions has grown out of that ingenuous phrase: not only because it tended to crystallize into a completed code of precedents a way of building which was clearly at the first stage in a process of development—*vers une architecture*—but because it focused the public attention upon the externals of structure and not upon the intentions for which these were used. That intention was itself blurred under the striking and sharply pointed aperçus of which Le Corbusier was guilty more than once. One must know architecture well to know what is meant by a **machine for living in**.

The word "style" can only be applied to an architecture which is dead; the word "international" to an architecture devoid of accident and growth. So long as an architecture is living and becoming it will take to itself continuously new elements and patterns—and drop from its practice elements and patterns no longer relevant to its onward march, or capable of eloquence. That will be especially true of an architecture

so wide in range, so swift in development as the architecture of our day, where new fashions crowd so closely and so imperatively upon each other's heels, and where to be known an architect must command every technique of self-advertisement.

Society determines all architectures by the spontaneous process of employing only those architects who conform to its demands. An architect's right to exploit his theories is limited only by the complacency of his clients; but to create an architecture one must find one's way to the public heart. That architecture will survive which the people take to themselves, having recognized it as their own. There is no greater fallacy than the notion that architecture can exist like paintings in a museum, independent of the people and of the machines which serve them.

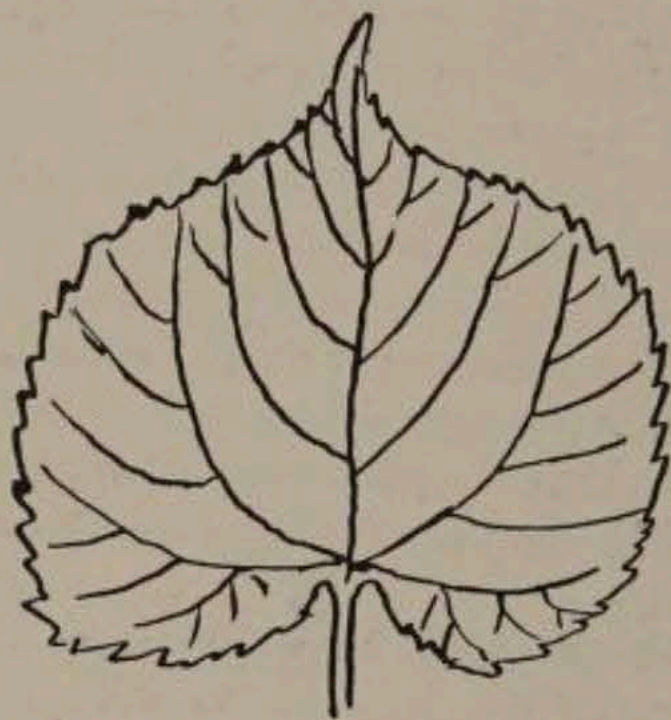
This truth is explained by the social nature of architecture. Only in its briefest phases can architecture interpret the thought and feeling of an individual. Architecture is not, like music, an introspective art. It does not lend itself readily to self-expression. The emotional relationships architecture establishes are those of men in associations; its passions and thoughts are the general passions and thoughts of men; its meanings are relevant to individuals chiefly as these participate in the life of society. Not gratitude, fear, hope and sorrow, not friendship and love, not storm and sunshine and season, are its concern; but religion, government, and the life of men in cities.

The houses of Le Corbusier are beautiful essays in an art of abstractions, but they are important only as they state the problem of modern architecture in its relation to the life of our society and the eager progress of our technologies. They tell us that modern structure enveloping a modern life may be capable of emotional content; the world had waited long for that message; and yet, I think, that message would have been less persuasive had not Le Corbusier found the means to extend his principle into a wider social complex.

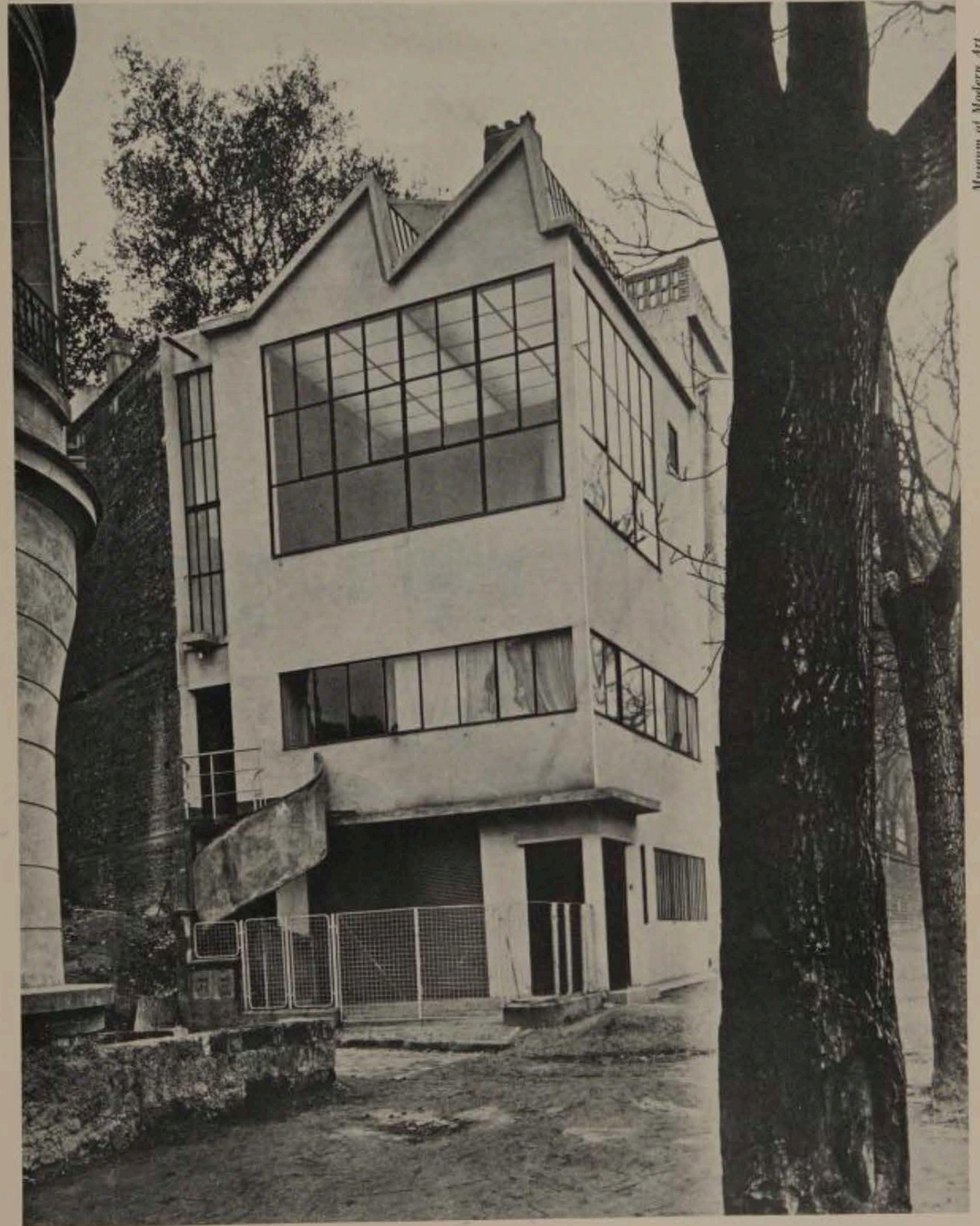
The design for the buildings of the League of Nations will long be remembered as an evident embodiment of that principle. The power of architecture to express and make visible an idea of the widest social range was never more persuasively demonstrated. The design for the Moscow Project repeats that promise, which in the Plan for Paris becomes a flaming standard.

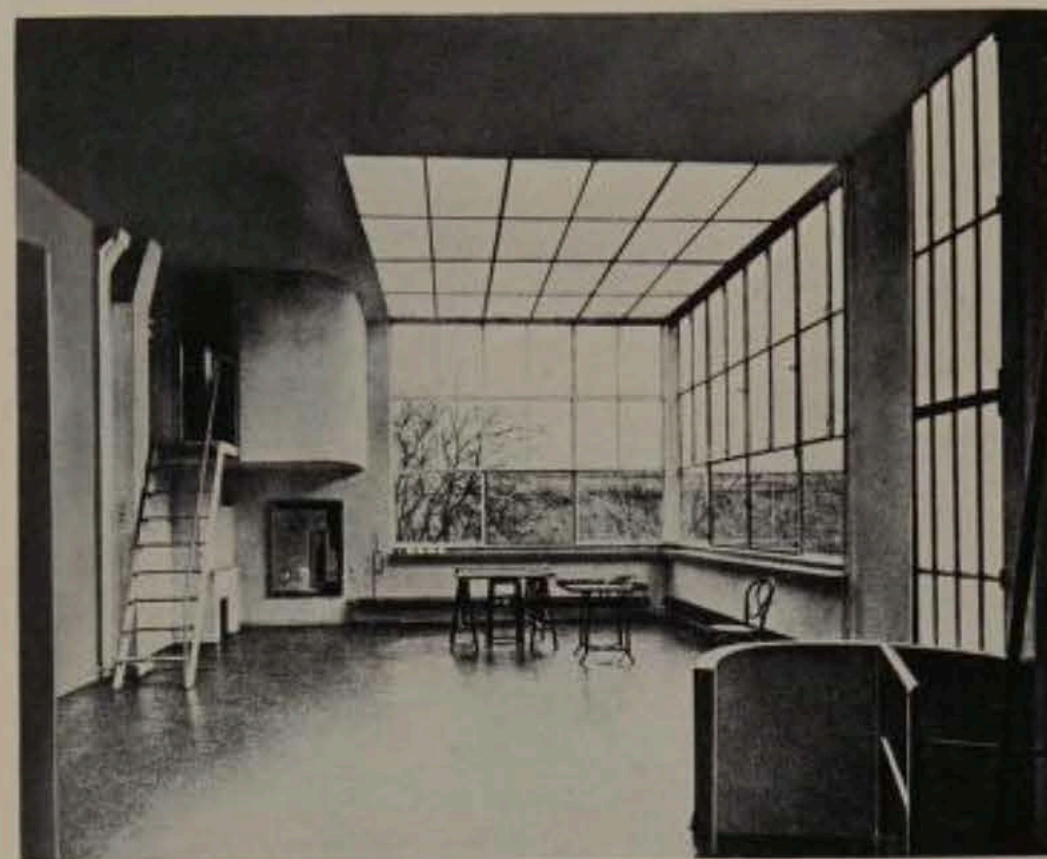
The doctrine, the aesthetic mastery, the virtuosity in structure—all those qualities in design which are personal and accidental—lose their importance when we turn to these heroic themes. These are great, not because they received the imprint of an architect's taste or learning or mode of thinking, but because through these avenues they received the deep imprint of the human spirit. They, and the thousand buildings they have engendered—and the thousands they will yet engender—have at heart an anonymous authorship. They are the creations of an era to whose silent artistry the architect is only tool and translator.

1. the family dwelling

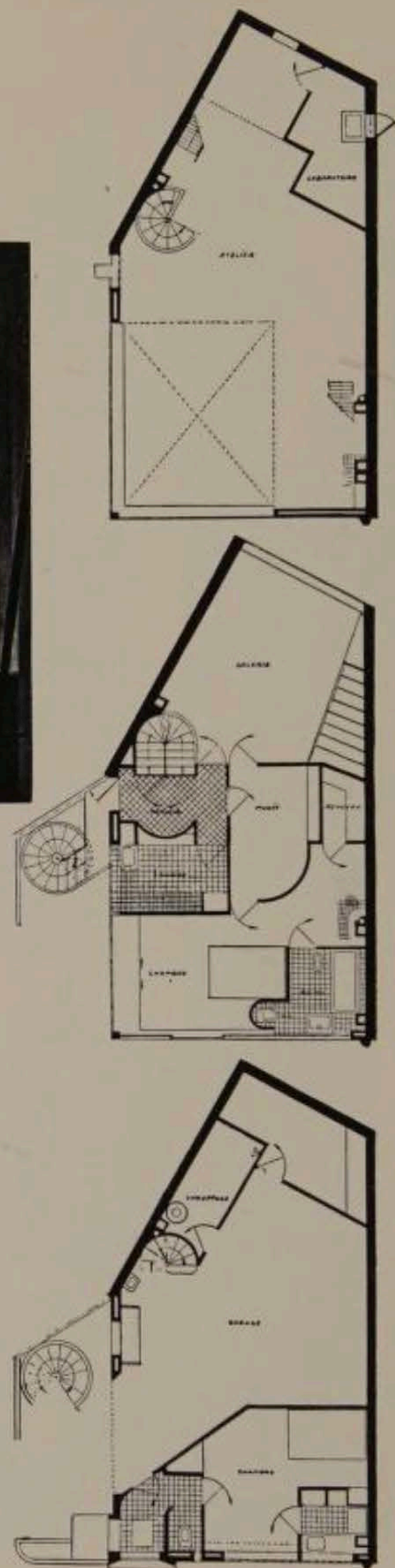


1922–1923. Studio for Amédée Ozenfant, Paris

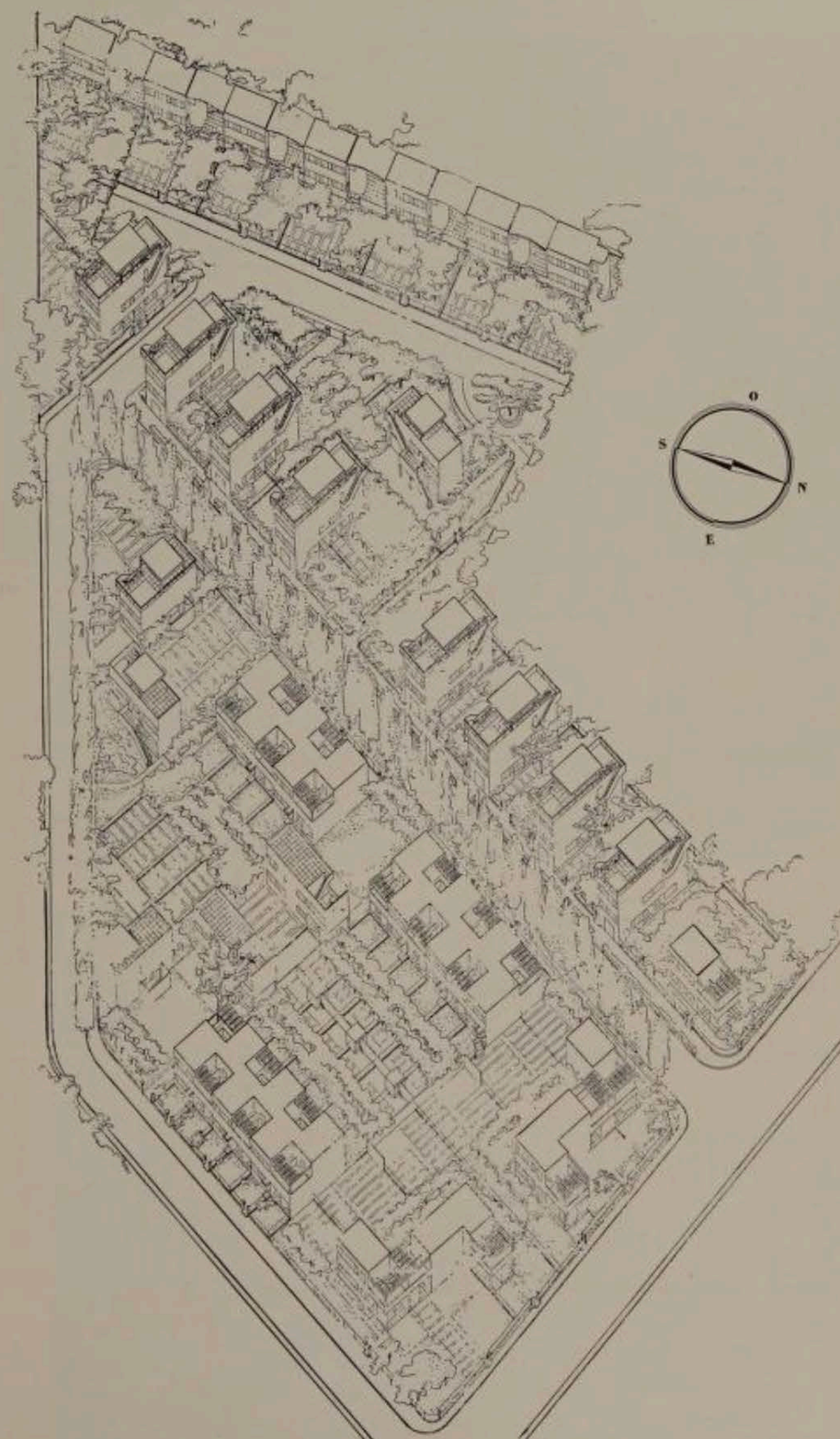


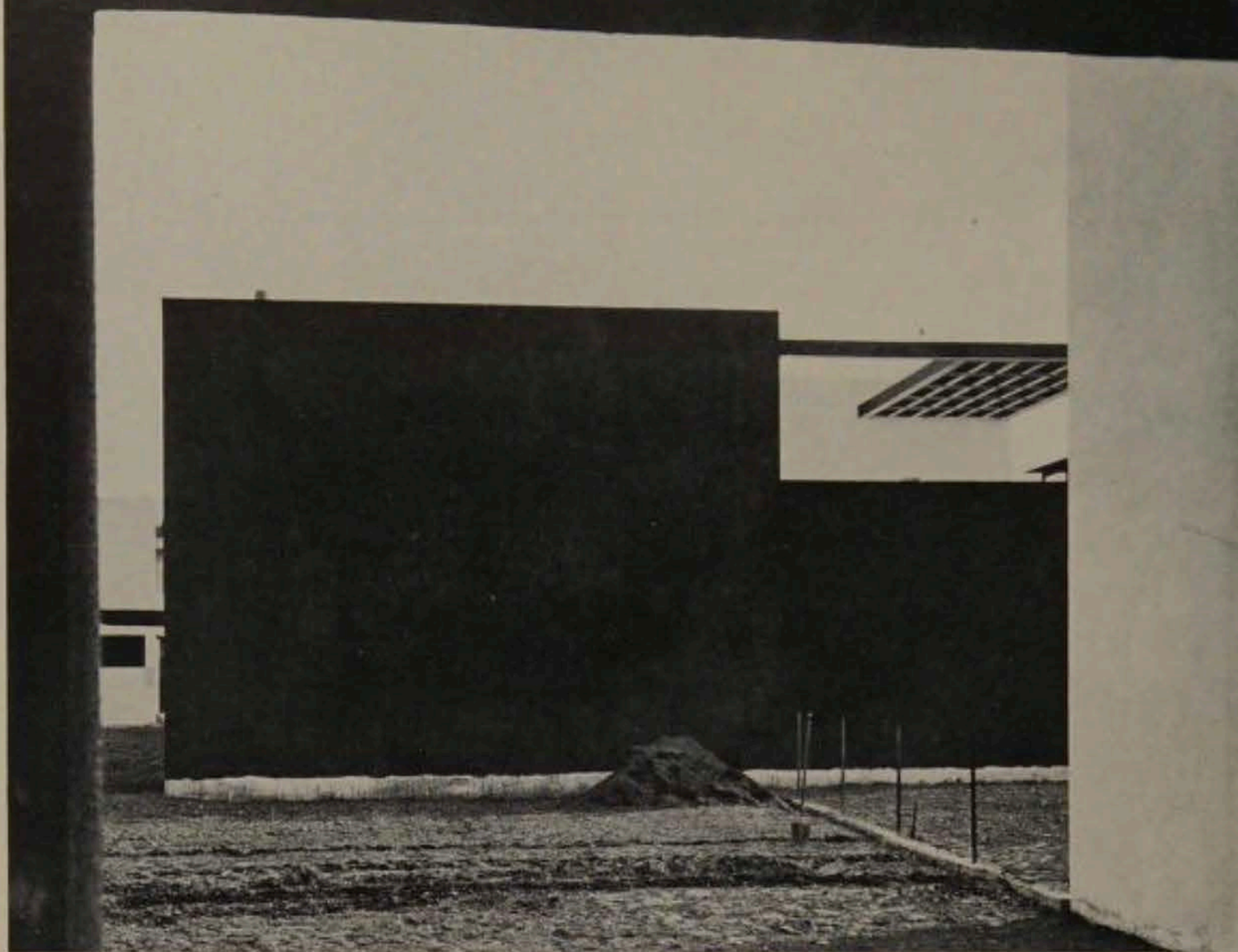


The studio, planned for an irregular and narrow city plot, provides a garage and utility room on the ground floor, living quarters and exhibition space on the second floor. The artist's workshop, together with a study, library and photographic laboratory, is on the third floor. The saw-tooth roof, which produced such astonishment at the time of its erection, was designed to provide overhead light and to show that, in spite of the current belief, an artist's studio is not different from any other workshop.



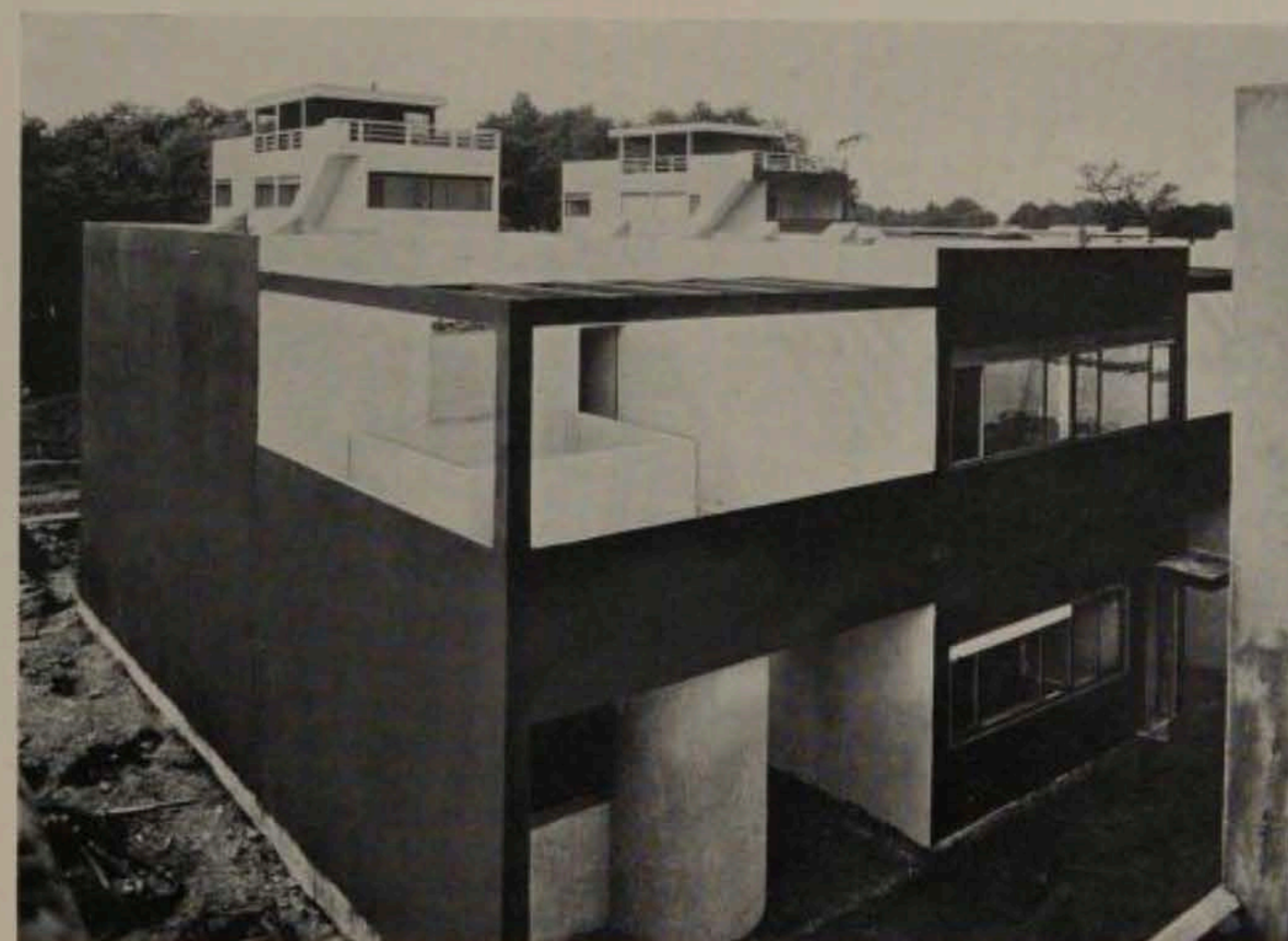
1923-1926. Housing for industrial workers at Pessac, near Bordeaux. Sectors B and C, shown below, contain 56 dwelling units.



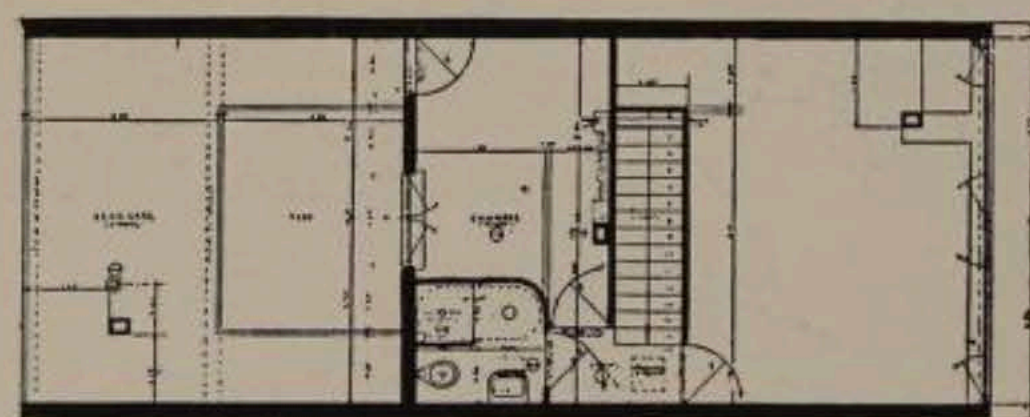


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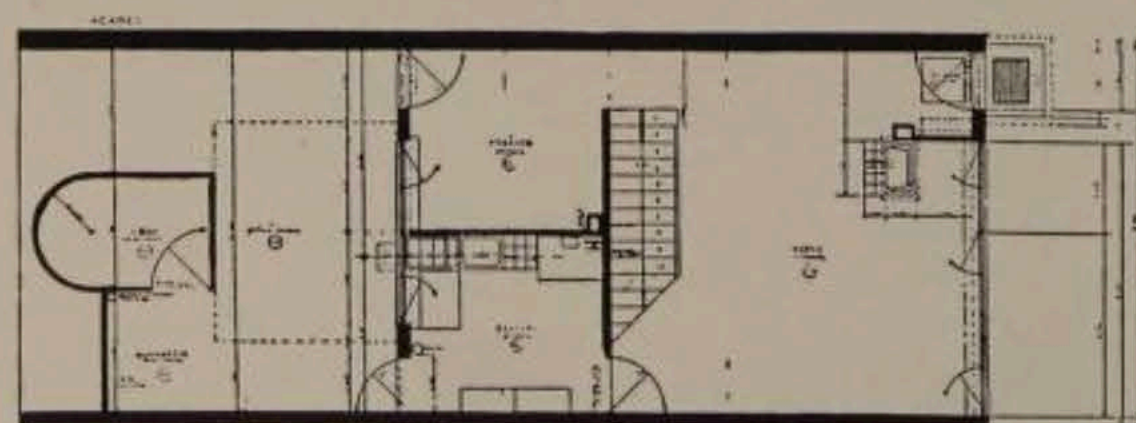
Le Corbusier conducted at Pessac a field experiment in advance production methods, site organization (what he called, at the time, "Taylorization of the building"), and standardization of parts, doors, windows, etc. The means of avoiding uniformity in spite of the use of standard plans, the application of strong colors on the exterior of the buildings as a legitimate architectural medium, and the development of the roof garden were also subjects of this experiment. Four types of houses were used in this development: a minimum house, illustrated here, a house with covered terrace, a house with outside stairs, and the "skyscraper," three stories high.



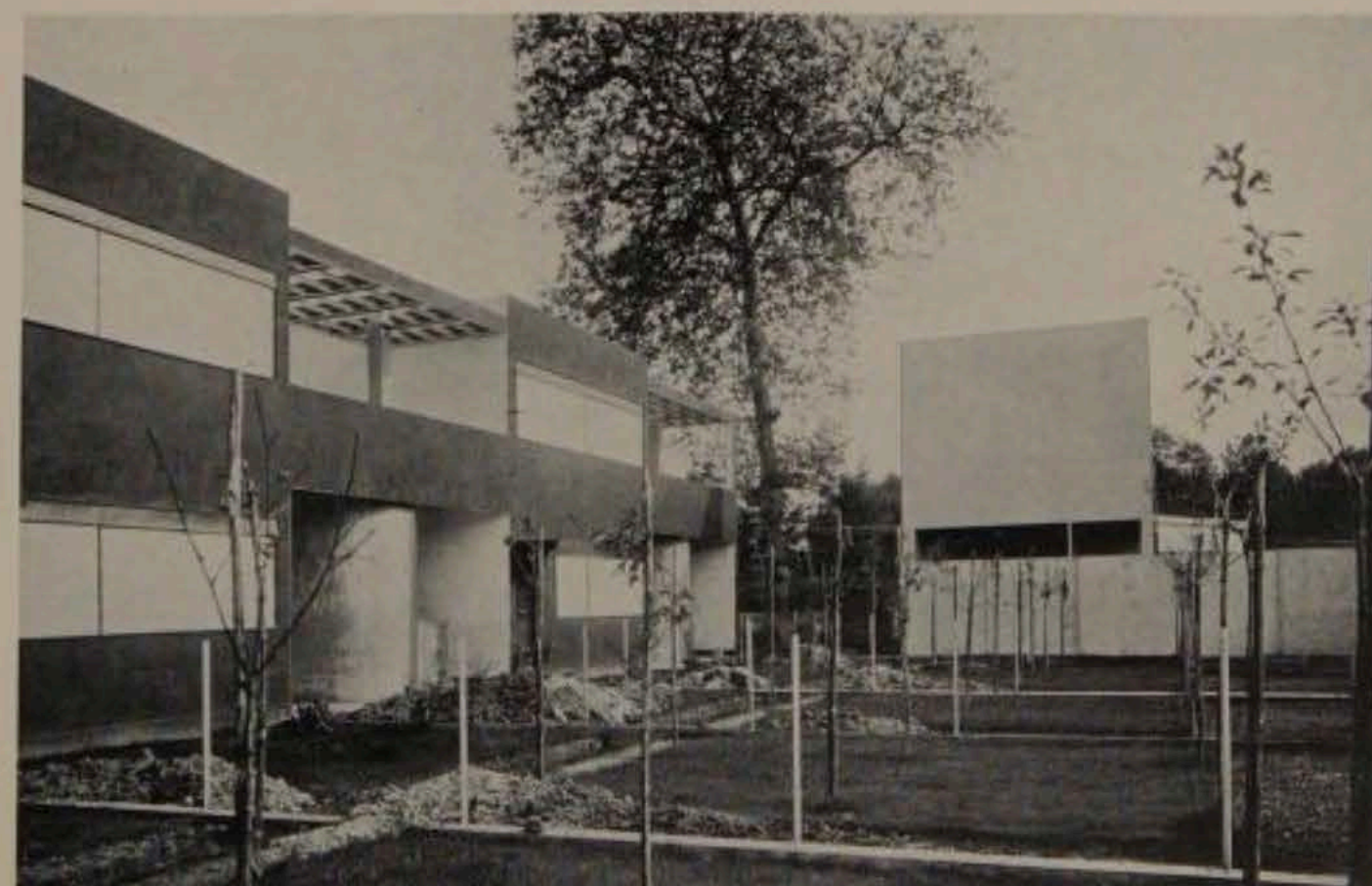
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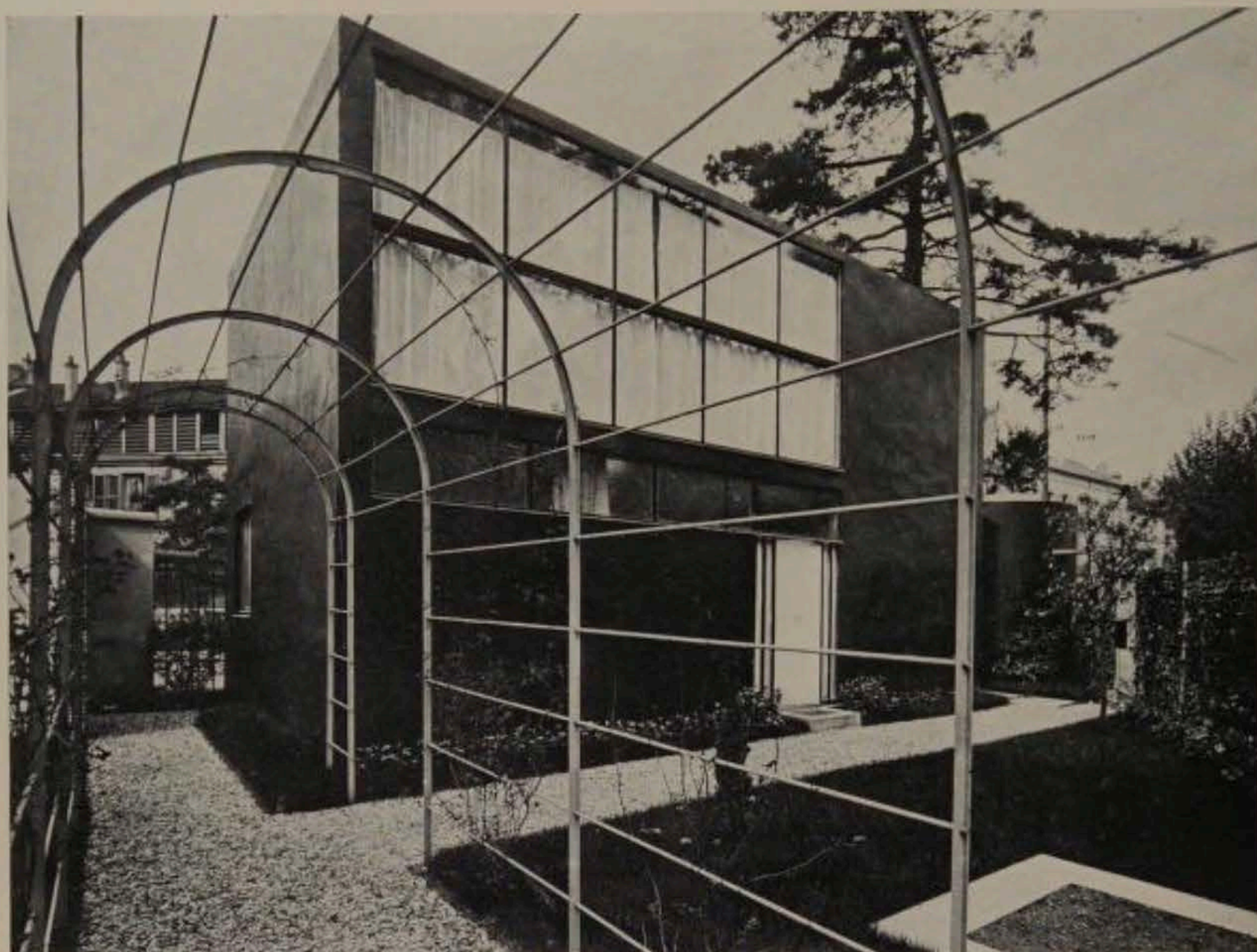


2nd Floor



1st Floor

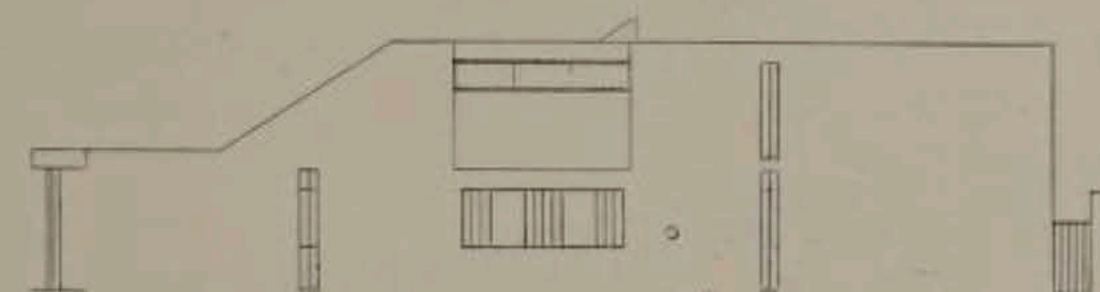




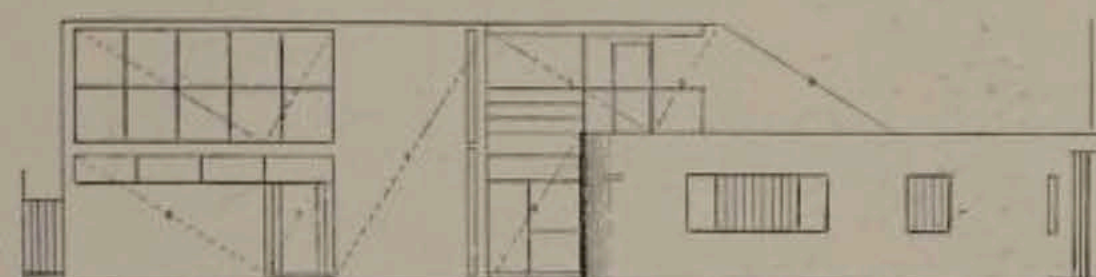
Museum of Modern Art

1924. Studio for the painter Miestschaninoff, Boulogne-sur-Seine. The studio, with a bedroom and bath on the balcony, is an independent unit. A small apartment with kitchenette, dining space, living room, sleeping alcove and shower on the ground floor forms another unit. The peculiar shape of the building is derived from the full utilization of the plot. Here we see many features which were developed further by Le Corbusier in his later buildings: application of the "golden mean" for the study of the façades, contrasting of minimum and maximum heights to create a feeling of spaciousness within a relatively small building, advantageous use of the peculiarities of the terrain. This house was demolished later to give place to a larger structure.

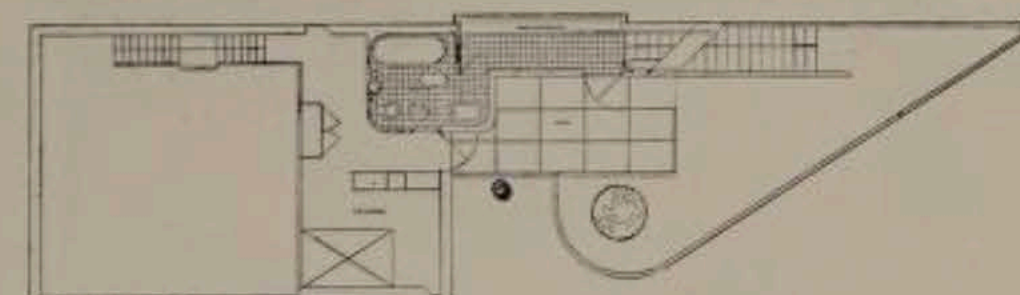
Street Elevation



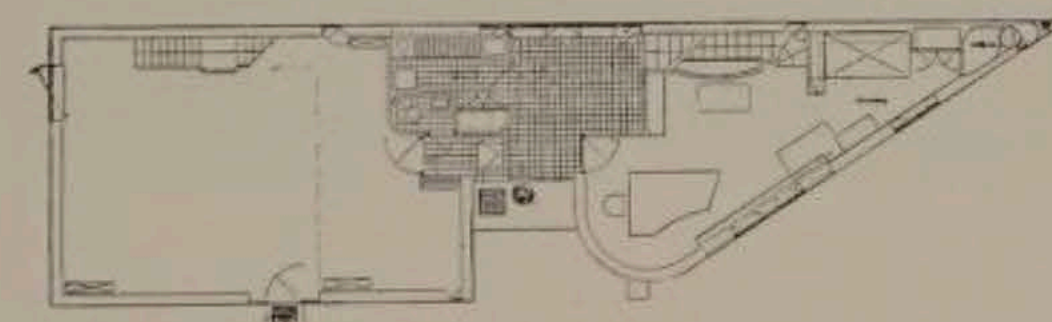
Garden Elevation

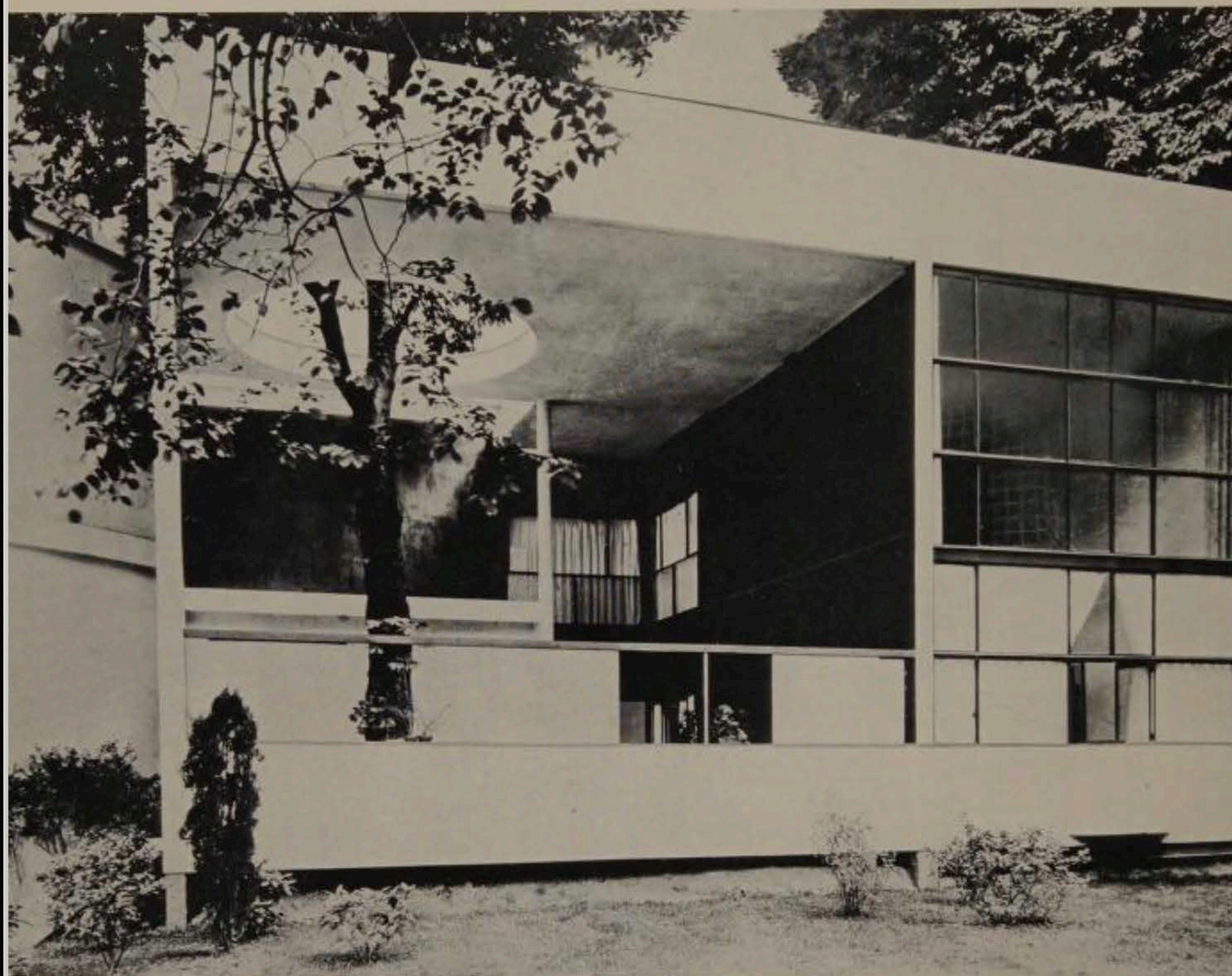


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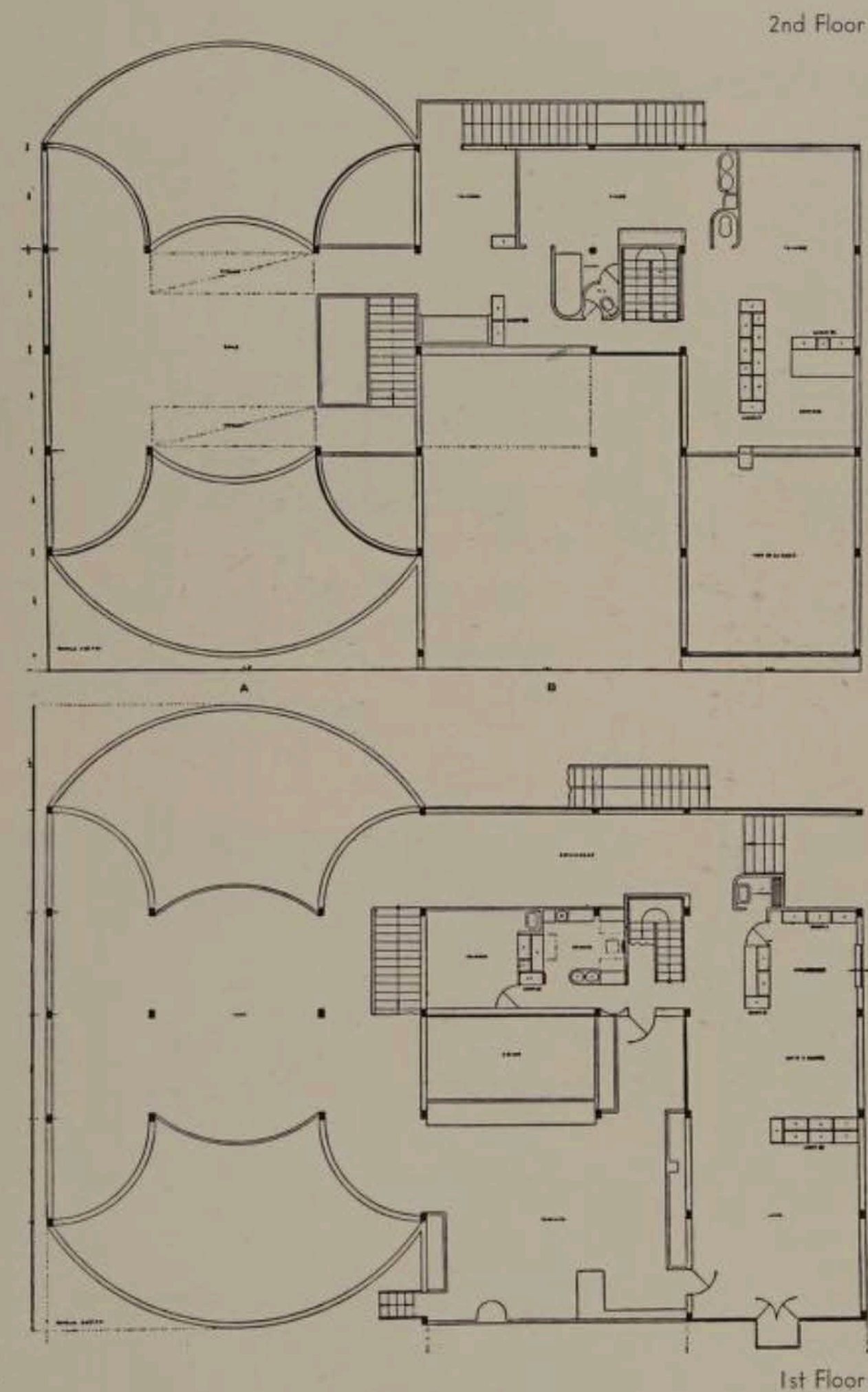
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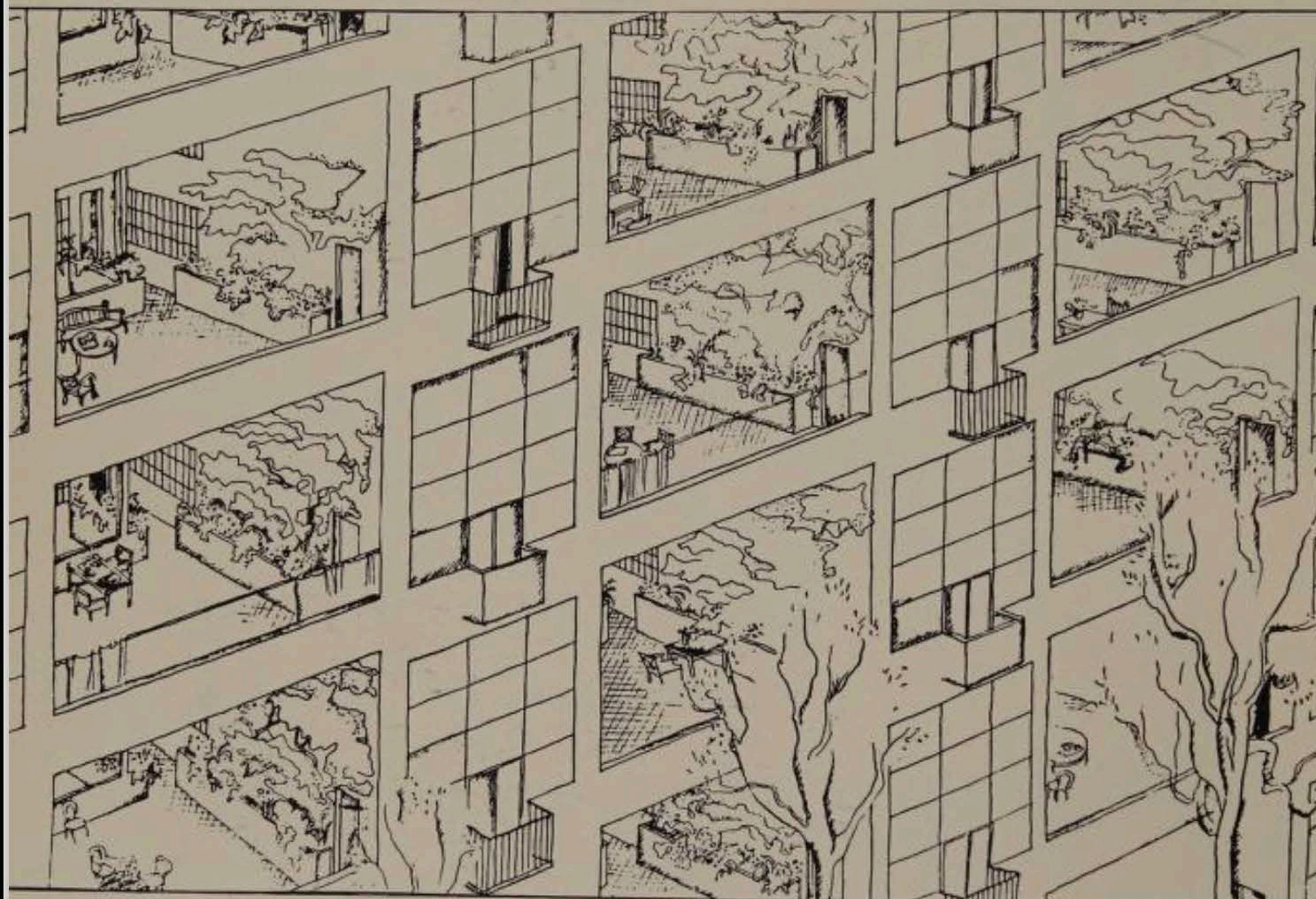




Museum of Modern Art

1925. Pavillon of the New Spirit (Esprit Nouveau) at the International Exposition of Decorative Arts in Paris. This pavilion demonstrates the main theories of the architect on family dwellings, developed through a number of projects and writings during the preceding years, and it remains one of the most significant experiments in contemporary architecture. Here we see the relationship between outdoor and indoor living, the demarcation of the various functions of the house integrated into one living space, the careful use of common, ready-made household equipment, and the introduction of works of art as objects of everyday life. Contemporary living has found its plastic expression in this pavilion which, it should be stated, was neither a palace nor a shelter for "minimum existence."



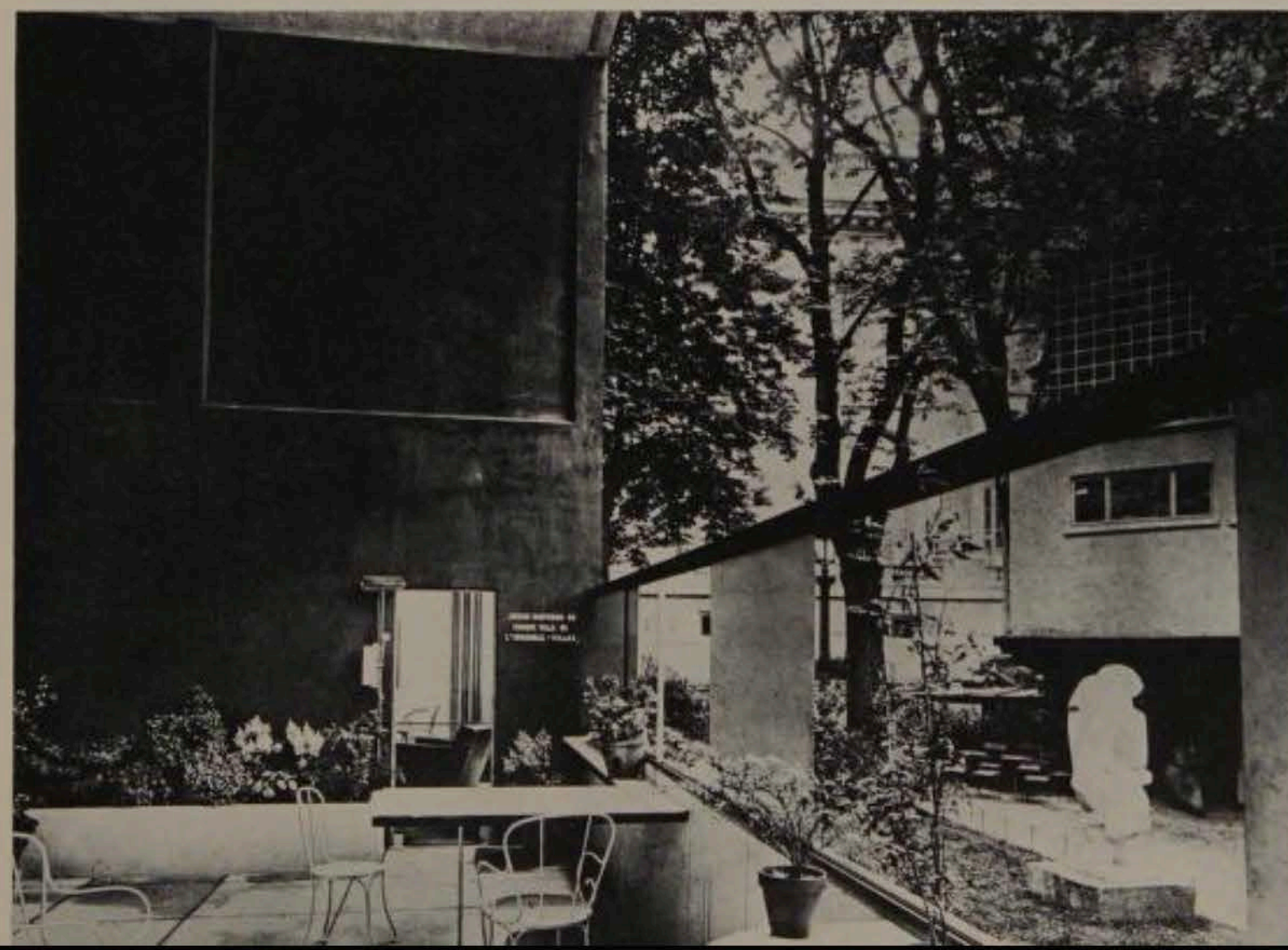


An early project for a vertical garden city, this multi-story building has dwelling units similar to the one of the New Spirit. Each unit retains its privacy and independence. The "suspended garden" is an integral part of the unit.



View of the living room and the dining space under the balcony. Storage cabinets and bookcases are the dividing partitions. Standard models of bentwood chairs and upholstered chairs of the "club" type provide the seating facilities. Below is the open-air living space with the common metal furniture used in the public parks of Paris. Sliding screens of sheet metal secure privacy.

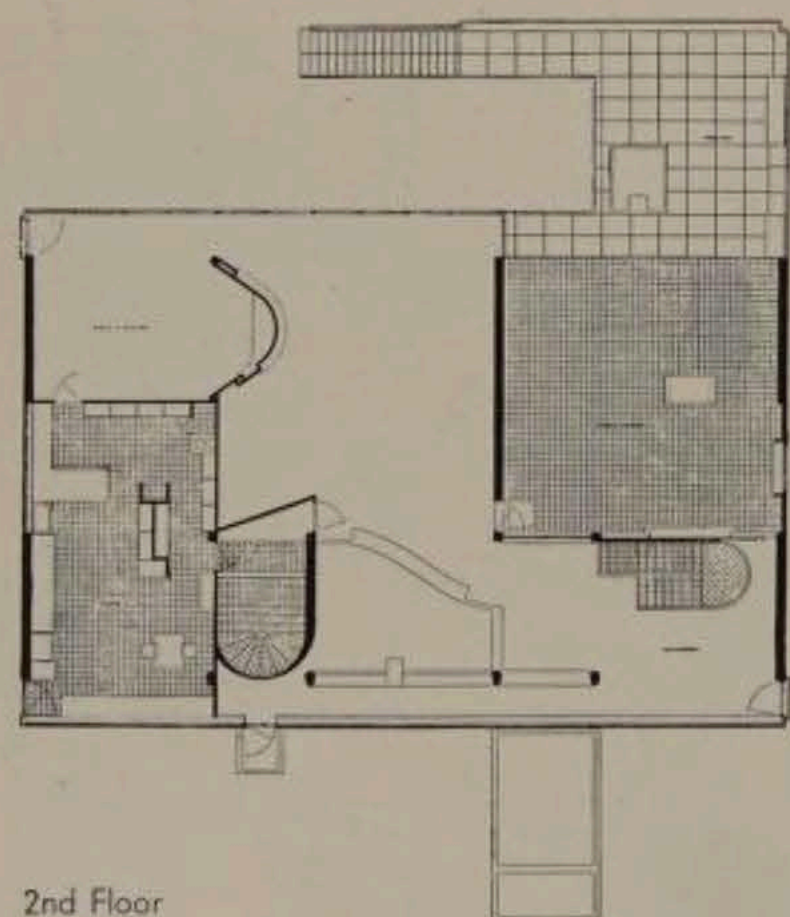
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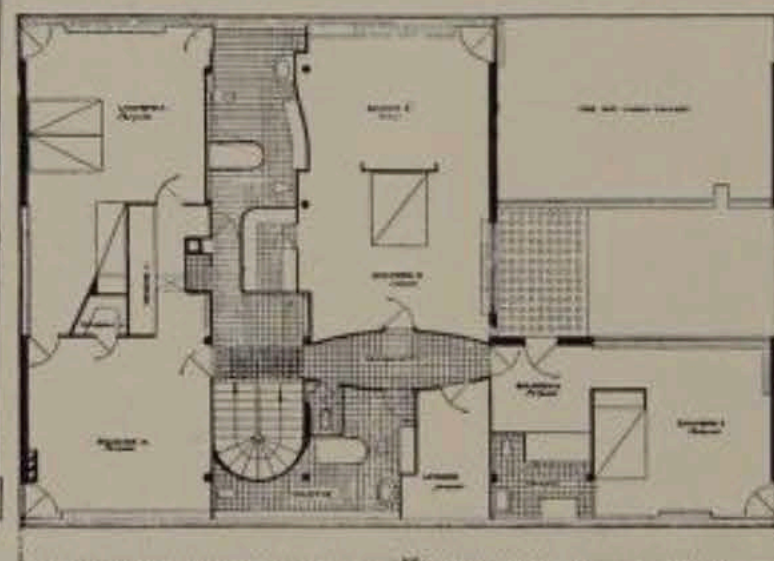


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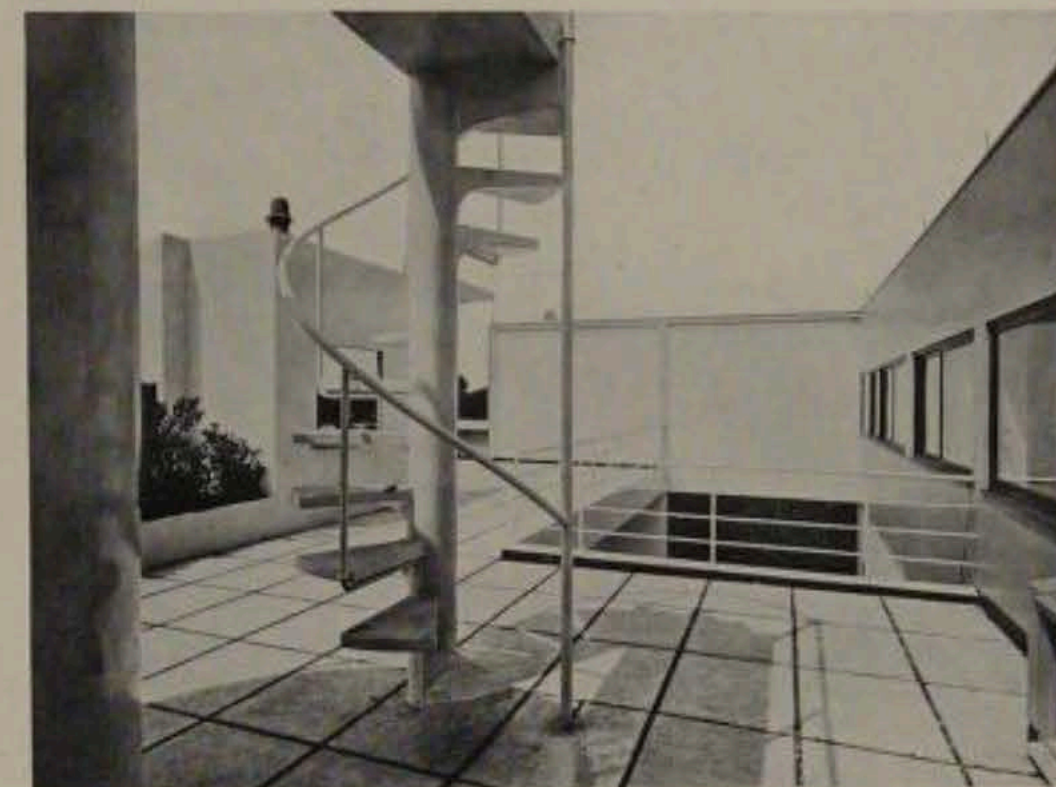
1926. House at Garches. One of the first buildings designed by Le Corbusier as a residence for a family in the higher income group. Nineteenth century conception of luxury with upholstered windows and separate, boxlike, drawing rooms, is translated here into light, flowing space.



2nd Floor

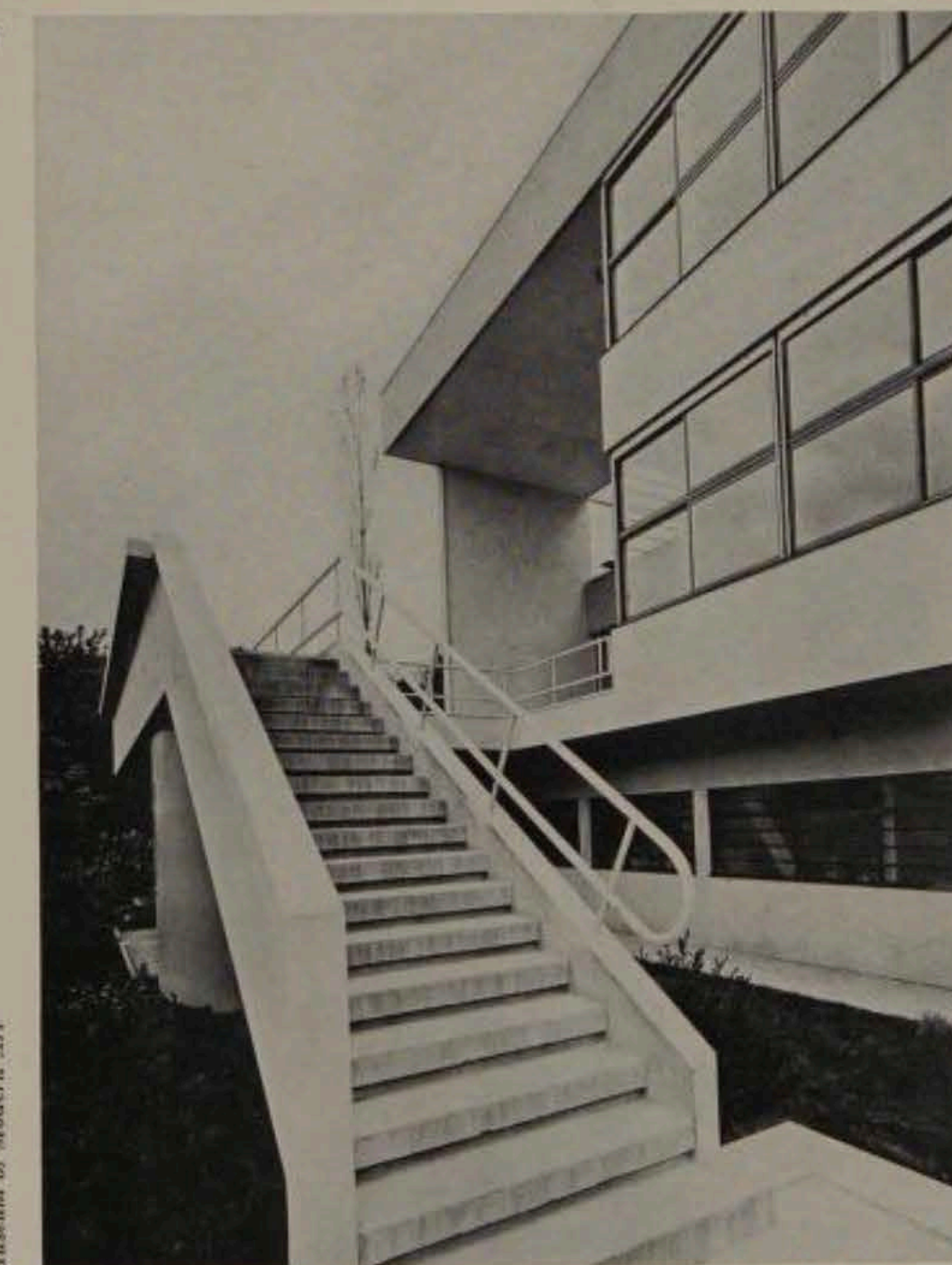


3rd Floor



View of the roof garden

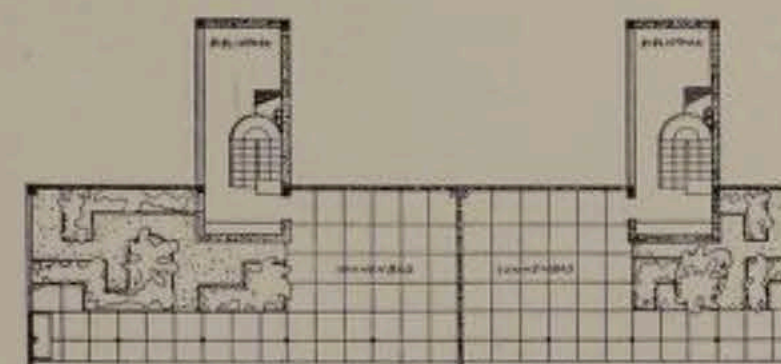
Stairs leading from the rear garden to the main floor



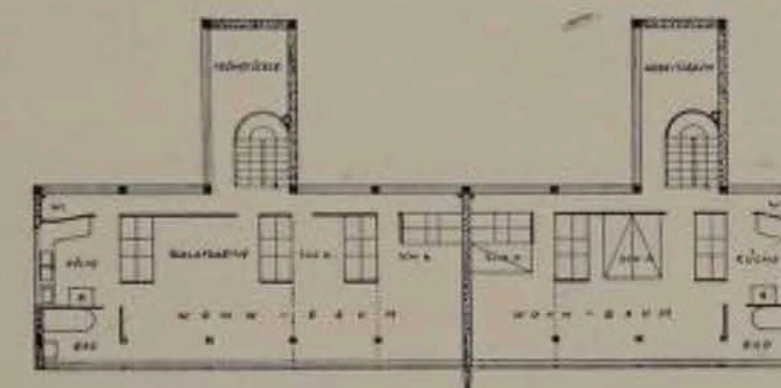
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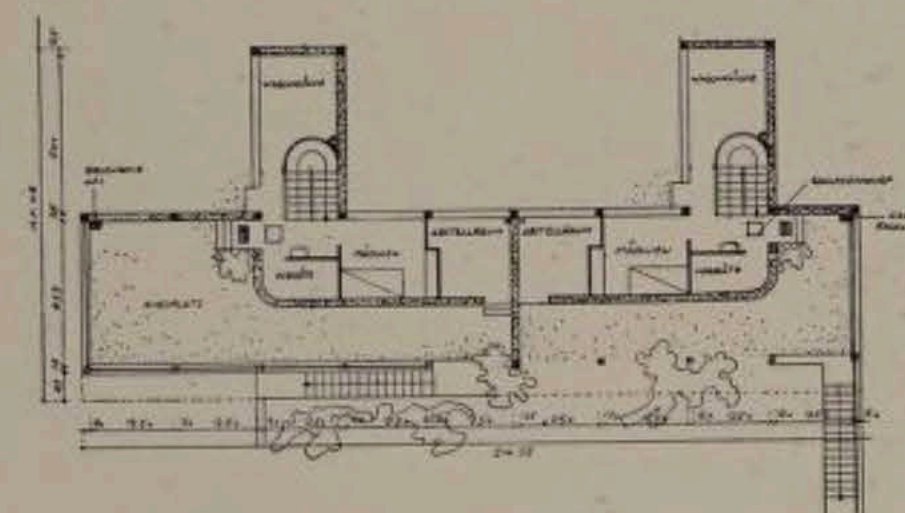
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2nd Floor



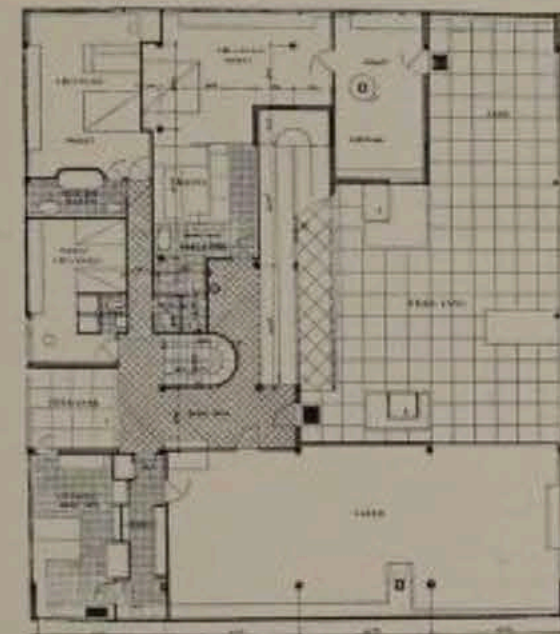
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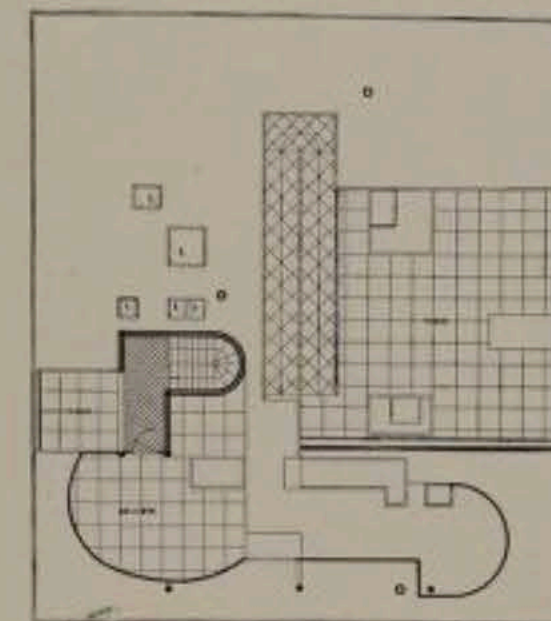
1927. Twin houses at the Exposition of Stuttgart in which leading architects of different countries were invited to design houses for the lower and middle income groups. These houses were occupied at the end of the exhibition. Le Corbusier designed two buildings for this occasion. In the one illustrated here, additional living-room space is offered during the day by the sleeping alcoves, and a quiet study is provided on the third floor for the member of the family who desires isolation. The ground floor is left open, with the exception of the entrance hall and the utility room.



Museum of Modern Art



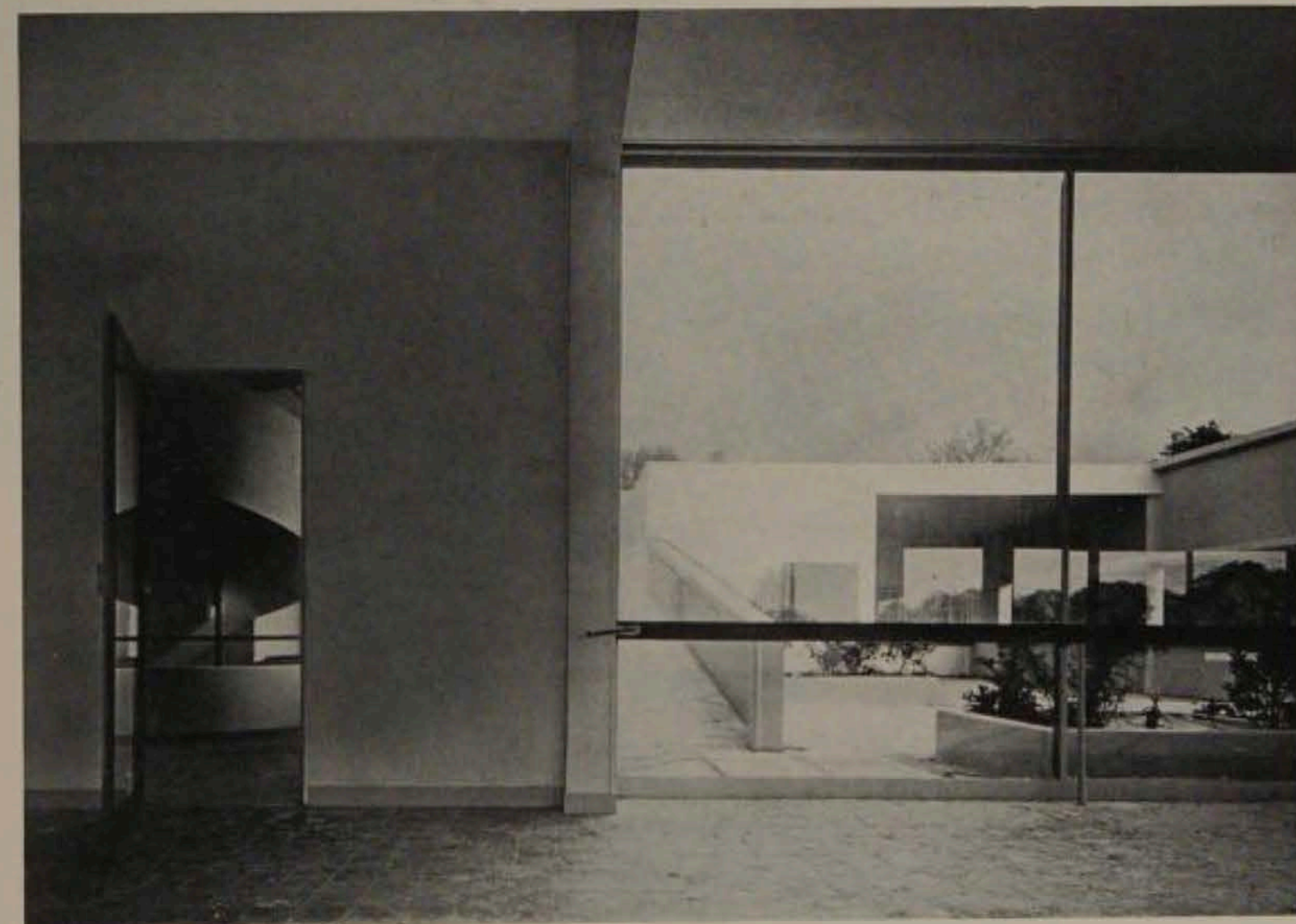
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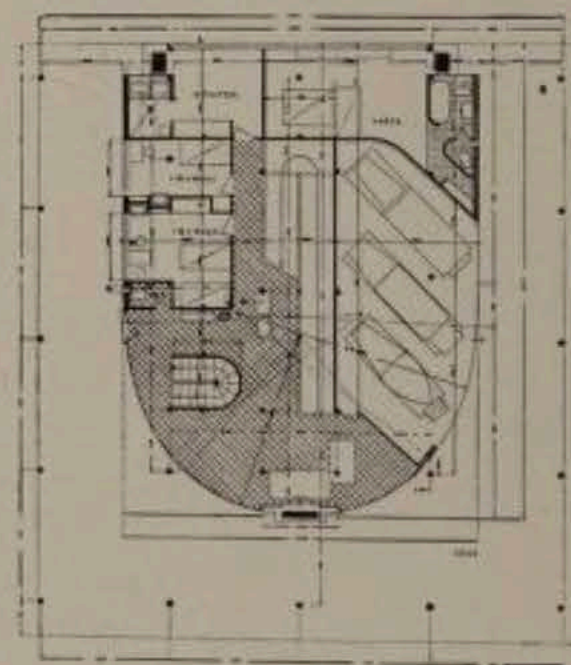
3rd Floor

Looking at the patio from the living room. The service stairs are at the left and the ramp at the center of the picture.

Museum of Modern Art



1928. **Savoye House at Poissy.** In spite of its wide area, seventy-five feet by seventy-five feet, the house contains a living room, a master bedroom, two small guest rooms, kitchen, pantry, and servants' quarters. The living room and the master bedroom are located around a patio which occupies roughly one-third of the area of the second floor. A ramp, together with a circular service stairs, links the three levels of the house. The house, placed on stilts, dominates the flat grounds which are surrounded by tall trees.

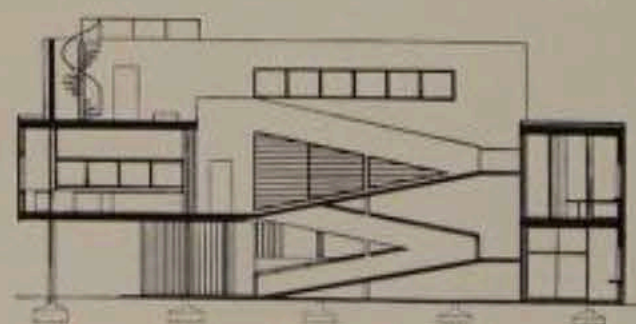


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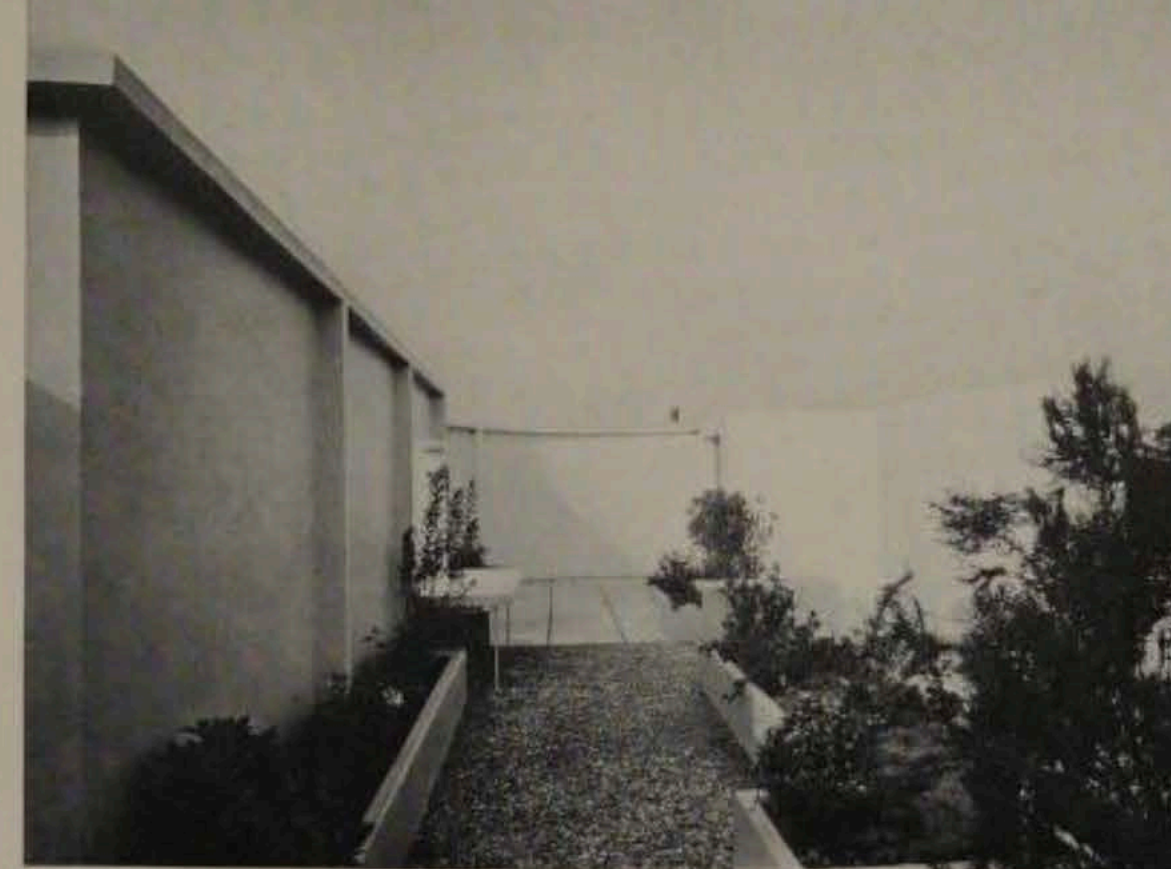


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The living room facing the patio. There is hardly a demarcation between indoors and outdoors.



The roof

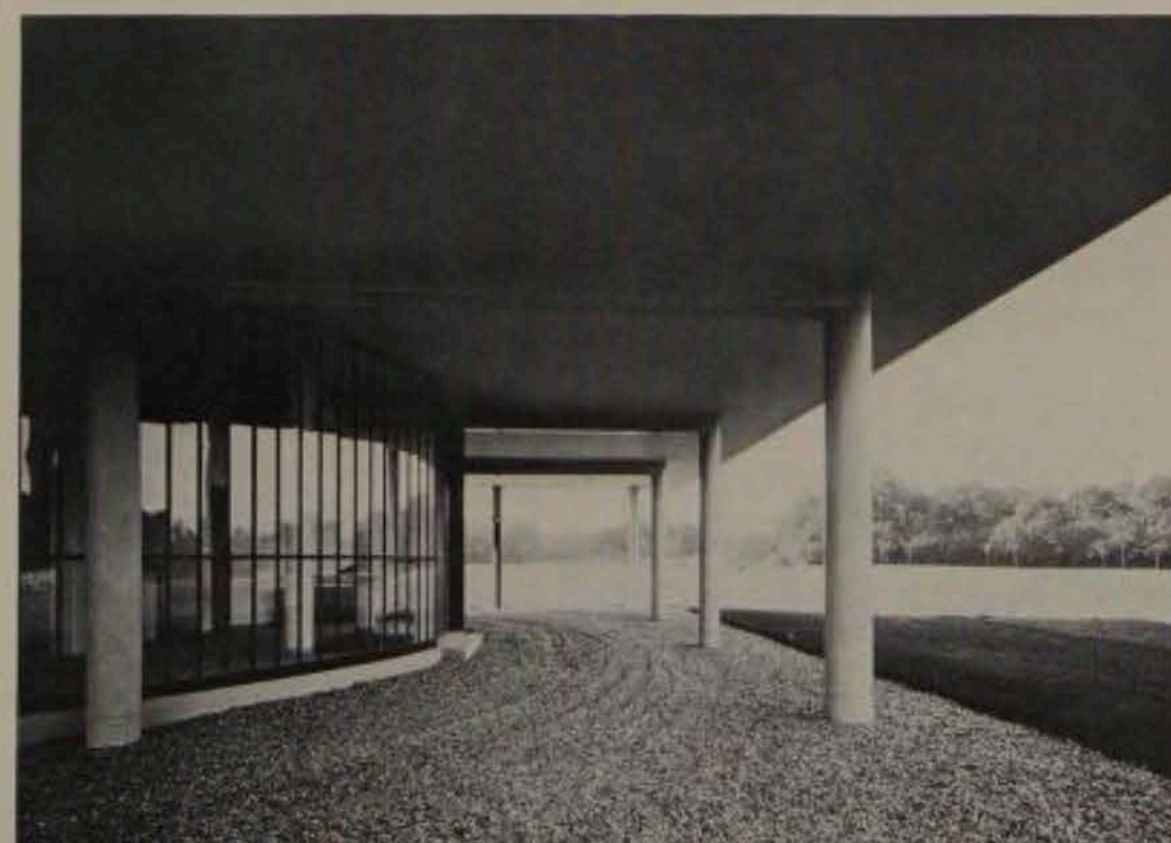


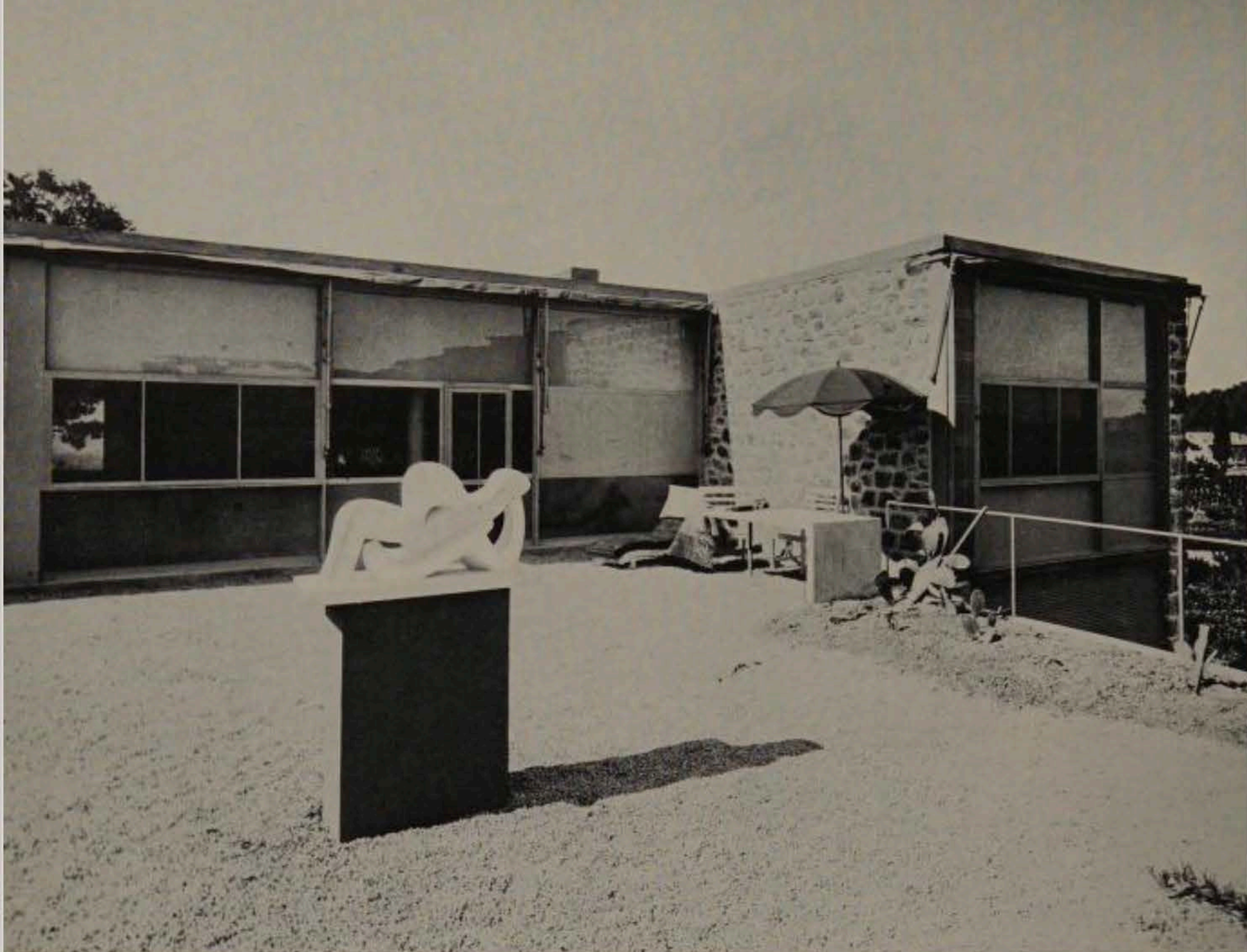
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The ramp



The stilts



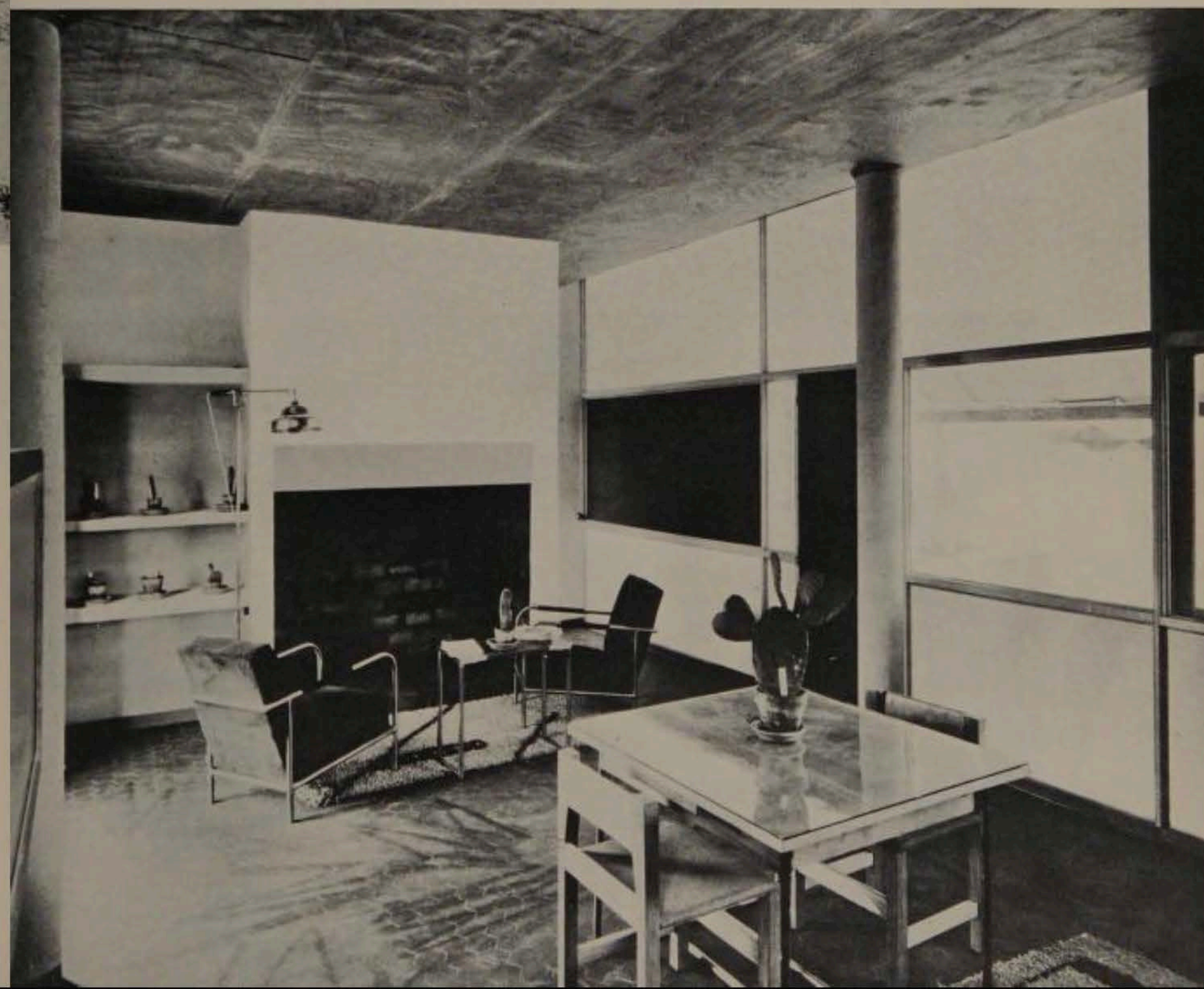
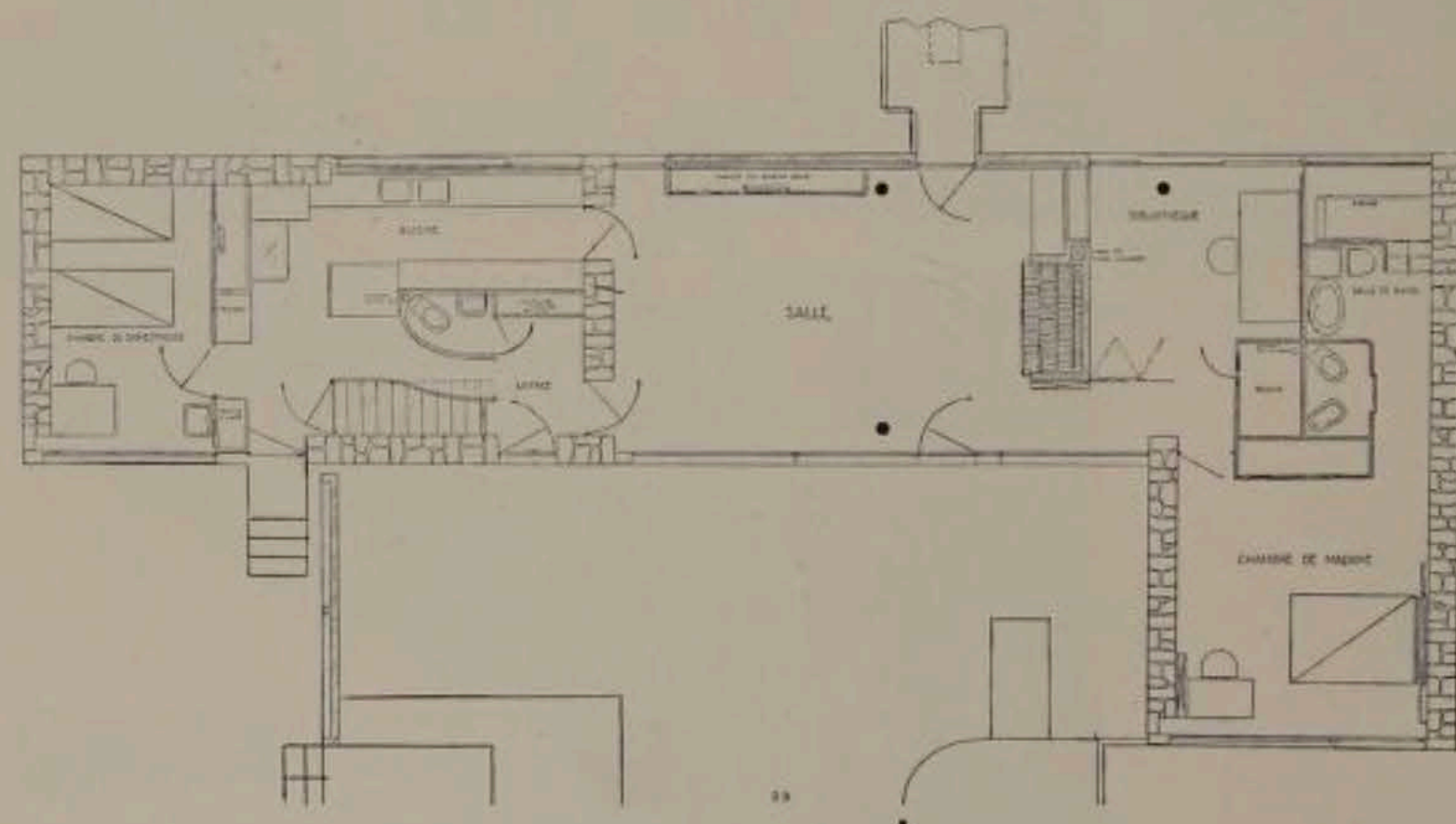


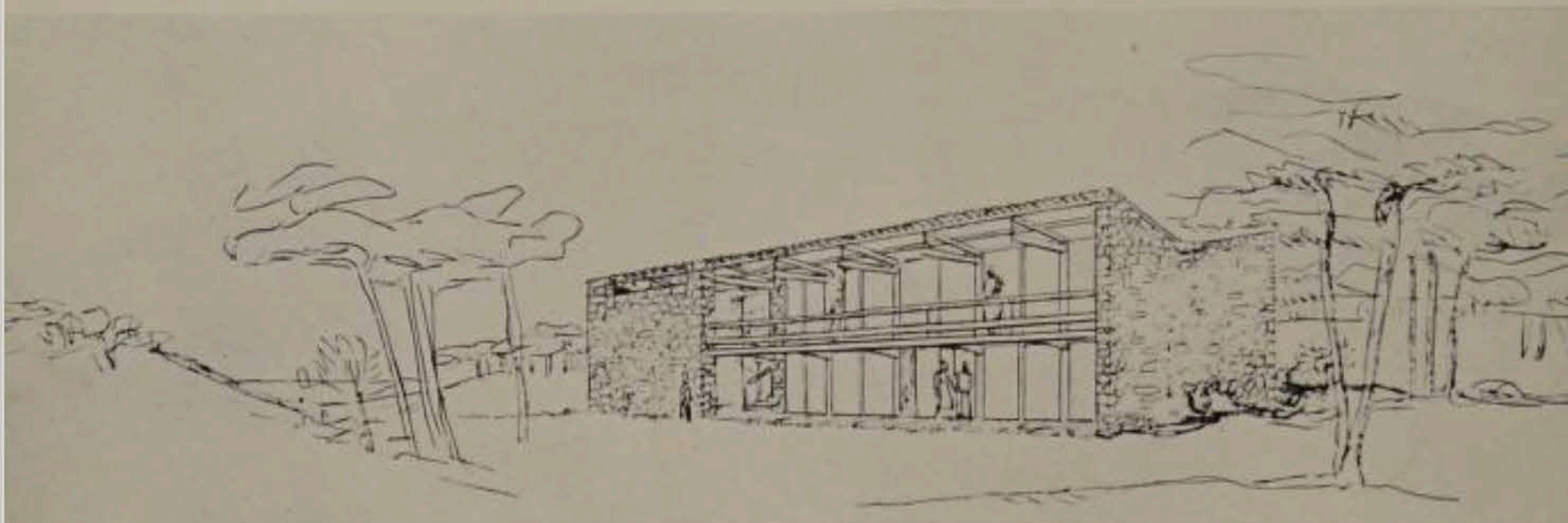
1930. Summer house at Le Pradet in the south of France. The use of local field-stone walls reduces the reinforced concrete frame to a minimum. Wherever view and orientation indicate, glass walls from floor to ceiling are used. On the left there is a guest room, on the right, the master bedroom with living room and kitchen between.

View of the living room

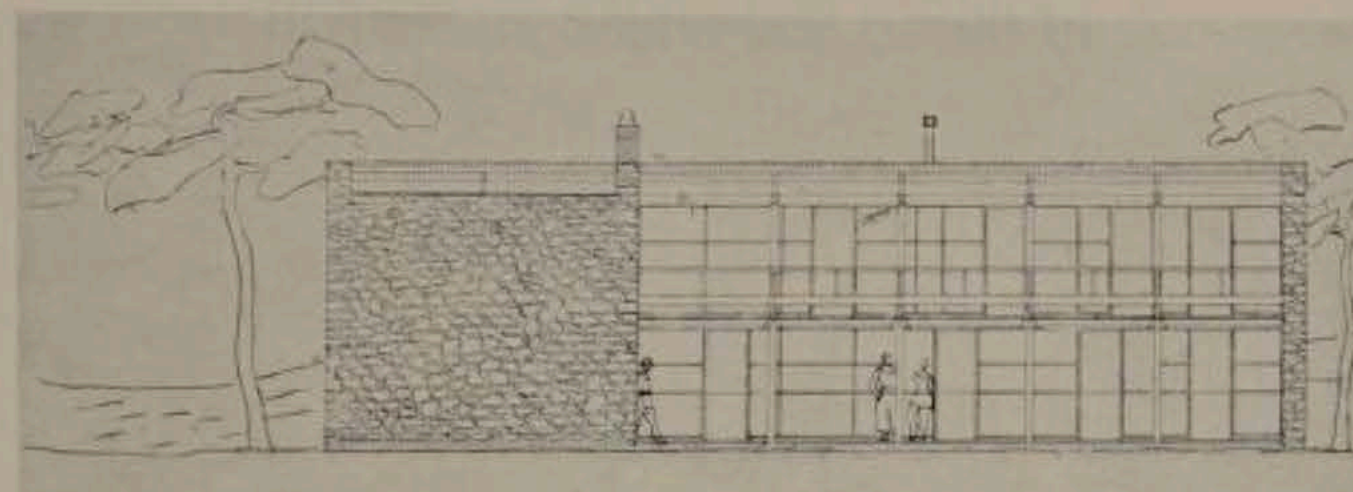
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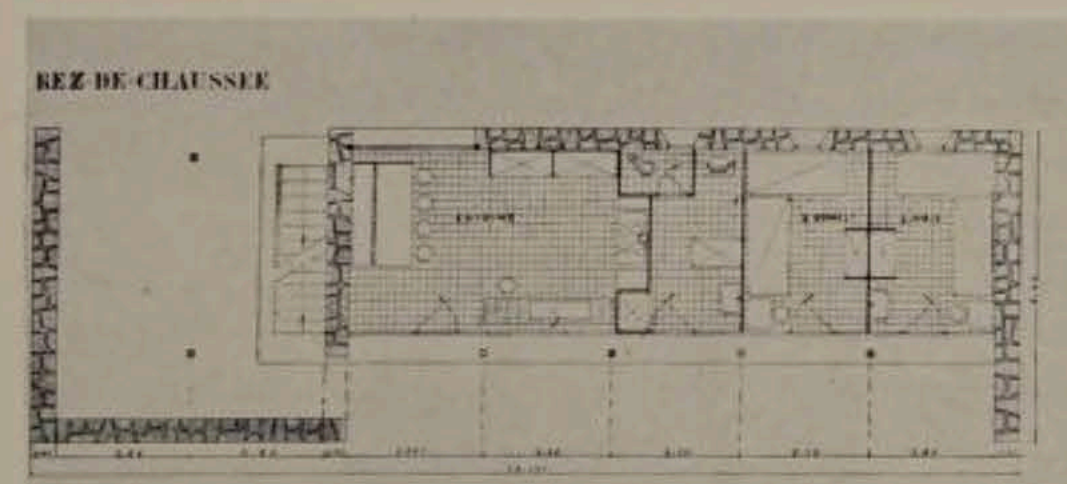
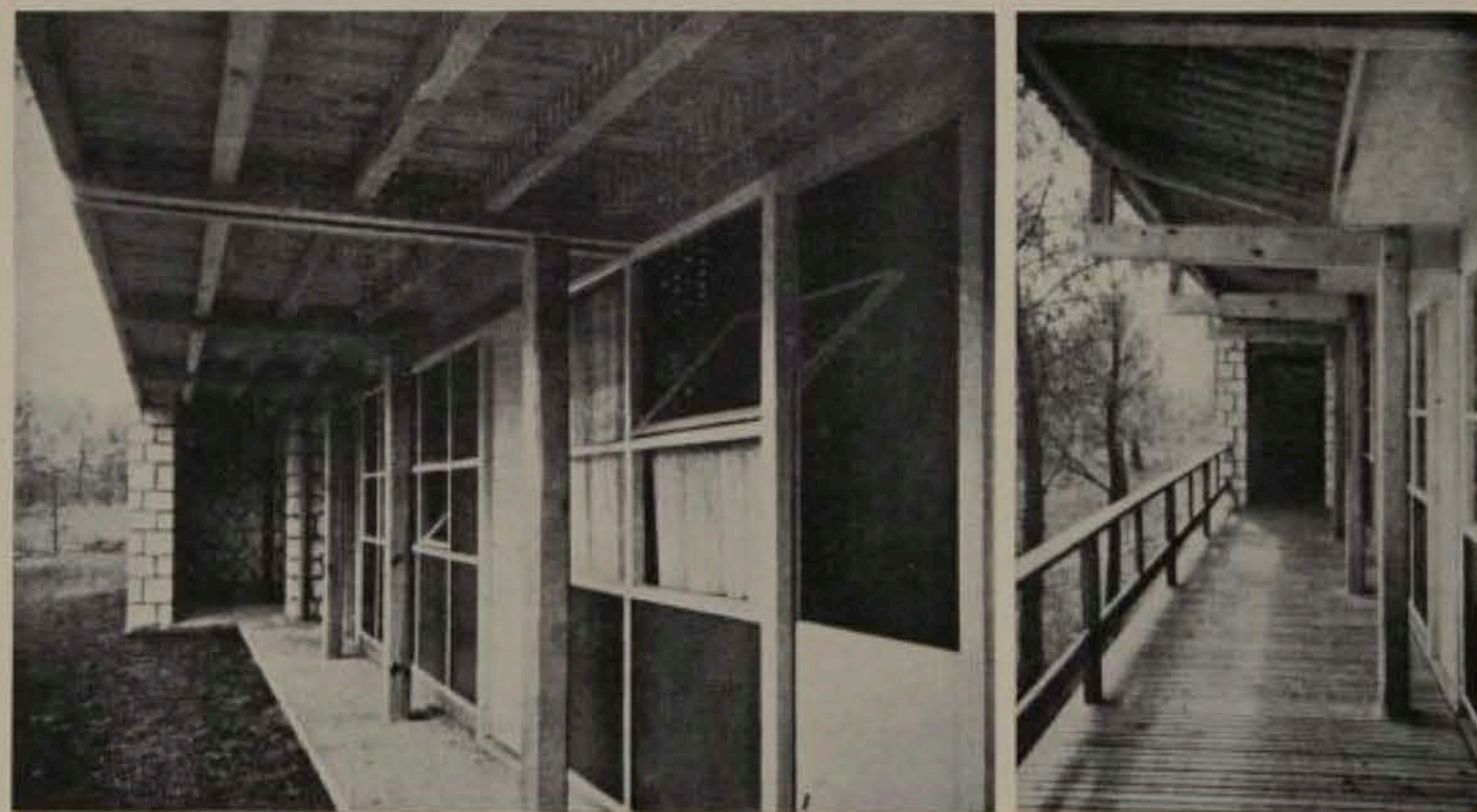




1934. Summer house at Mathes. Low-cost construction of masonry walls and wood frame. The roof has an inverted pitch. All rooms open to an outside balcony corridor.



Elevation



Ground floor plan

2. furniture and house equipment



Furniture Design and the Common Object

BY DR. SIGFRIED GIEDION

Around 1920 France ranked as a land completely routine-bogged in everything pertaining to the house. The extent of the void may be measured by the Paris Exposition Internationale des Arts Décoratifs of 1925. The only display that has not fallen through the historical sieve was the Pavillon de l'Esprit Nouveau erected by Le Corbusier and Pierre Jeanneret. It was relegated to the outskirts of the exhibition and, as Le Corbusier himself remarked, "was the poorest and the most hidden away" of all. At the Paris Exposition of 1867, Edouard Manet was obliged to set up a plank hut outside the grounds to get a showing for his outlawed paintings. One thing was common to both cases: the authorities were ashamed of their artists.

The Pavillon de l'Esprit Nouveau of 1925 was not merely Le Corbusier's protest: "Nous ne croyons pas à l'art décoratif" (We do not believe in interior decoration). The Pavilion showed what was ready to take decoration's place. Its originators had a surfeit of problems to put before the public, but little space in which to display them. The Pavilion was to fulfill the spirited writing of the review *L'Esprit Nouveau* put out by Ozenfant and Le Corbusier in collaboration with Paul Dermée from 1920 to 1925. It was to speak for the new dwelling with its *plan libre*, for the new painting and the new urbanism. It was designed as a two-story cell of the large apartment houses which Le Corbusier had planned for Paris.

The whole interior laid down the new standard. Instead of "designed" vases of glass or ceramics there were laboratory jars, forms purified by use and function. Instead of elaborately cut crystal there were the plain wineglasses of any French café, objects whose simple form never ceased to refresh the fantasy of the cubist painters. Instead of the usual carpets of interior decoration there were the vigorously woven Berber carpets from North Africa with their simple abstract patterns. Instead of tear-drop chandeliers there were stage floodlights or store-window illumination. Instead of the knickknacks or ceramics of arts and crafts there were the mother-of-pearl spirals of a sea shell.

In the same spirit, as a final touch, the colored walls were hung with paintings by Juan Gris, Fernand Léger, Picasso, Ozenfant and Le Corbusier. Throughout was the search for a purer, more direct form wherever it might be found: in nature, in laboratories, in Bedouin carpets, in industrial manufacture purified by serial produc-

tion. This union of seemingly unrelated elements was to do away with the idea that all objects of an interior should be designed by one individual. A dwelling room is not an incubator to be sterilized of all foreign germs. Life past and present shall be given an opportunity to interact. The atmosphere that can arise from the free interplay of heterogeneous elements is familiar to whoever set foot in later interiors of our period. It was at the Pavillon de l'Esprit Nouveau in 1925, that one first saw this so clearly and so consistently expressed.

Le Corbusier had recognized the purer forms of the Thonet chairs.* Almost as manifestos, Le Corbusier showed these standardized chairs in the Pavilion. He tells us himself the reason for his choice: "We have introduced the humble Thonet chair of steamed wood, certainly the most common as well as the least costly of chairs. And we believe that this chair, whose millions of representatives are used on the Continent and in the two Americas, possess titles of nobility."** In this Pavillon de l'Esprit Nouveau, Le Corbusier raised his cabinets on tubular steel legs and set his table tops on welded tubular frames. Above all he was proud of his staircase of bent and curved tubes: "We have made a staircase like a bicycle chassis."***

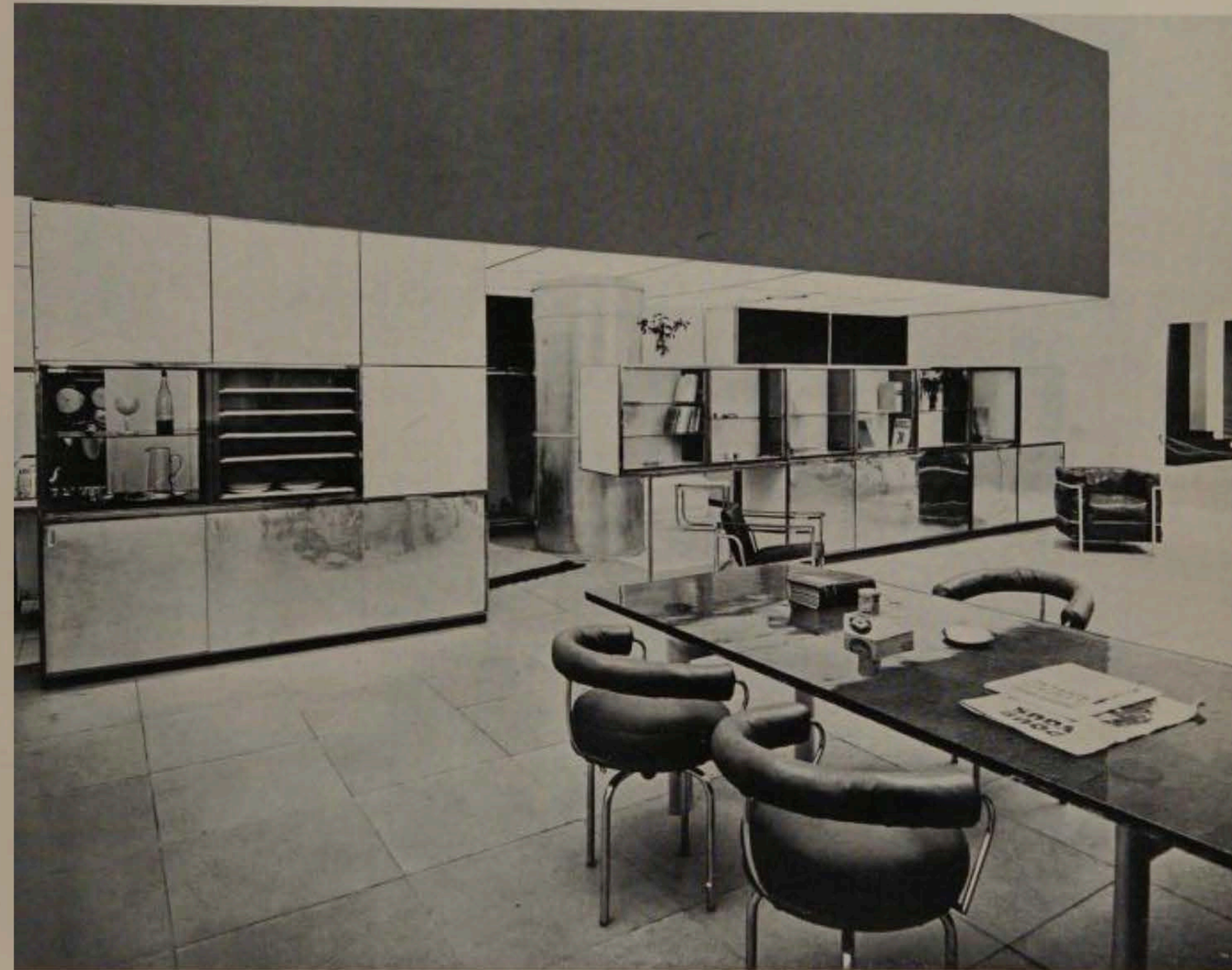
Most of the standard models resulted from Le Corbusier's collaboration with Pierre Jeanneret and Charlotte Perriand. Such was the swing-back armchair with pivoted back rest. The adjustable recliner or chaise longue *basculante* shows the freedom from tradition with its lines boldly molded to the human body. Its immediate ancestor is the invalid chair formed of two separate parts, an independent base on which is mounted a sitting or a lying surface. Such invalid chairs were everywhere to be found in the nineteenth century. On the broad black base of the adjustable recliner rests the chromium tubed upper part, secured at any desired angle by the two rubber pads of the underframe. Unlike the mobile planes of the invalid chair, the supporting surfaces of the recliner are bound in a rigid curve. This means that the sitter must rise to his feet whenever he wishes to change the slope. And, as in much of the furniture of this time, rising is not too easy. Adjustable chairs—the barber's, the office chair, the adjustable lounge chair—return the sitter to the normal position. Not the least appeal of the adjustable recliner is its contrast of vigorously curved planes above the single span of the base. Reservations apart, one must admit that a century of effort to make lounges adjustable to the body are here summed up in classical form.

Thus, it was not only the bent-wood chair that entered into the new type—but a new vision.

*Michael Thonet (1796-1871) experimented at Boppard, Germany, with chairs of which all parts, top rail included, were composed of four or five layers of veneer shaped by heat in molds (1836-1840). Cf., W. F. Exner, *Das Biegen des Holses*, 3rd ed. (Vienna, 1893).

**Le Corbusier, *Almanach d'architecture moderne* (Paris, 1925), p. 145.

****Ibid.*, p. 195.



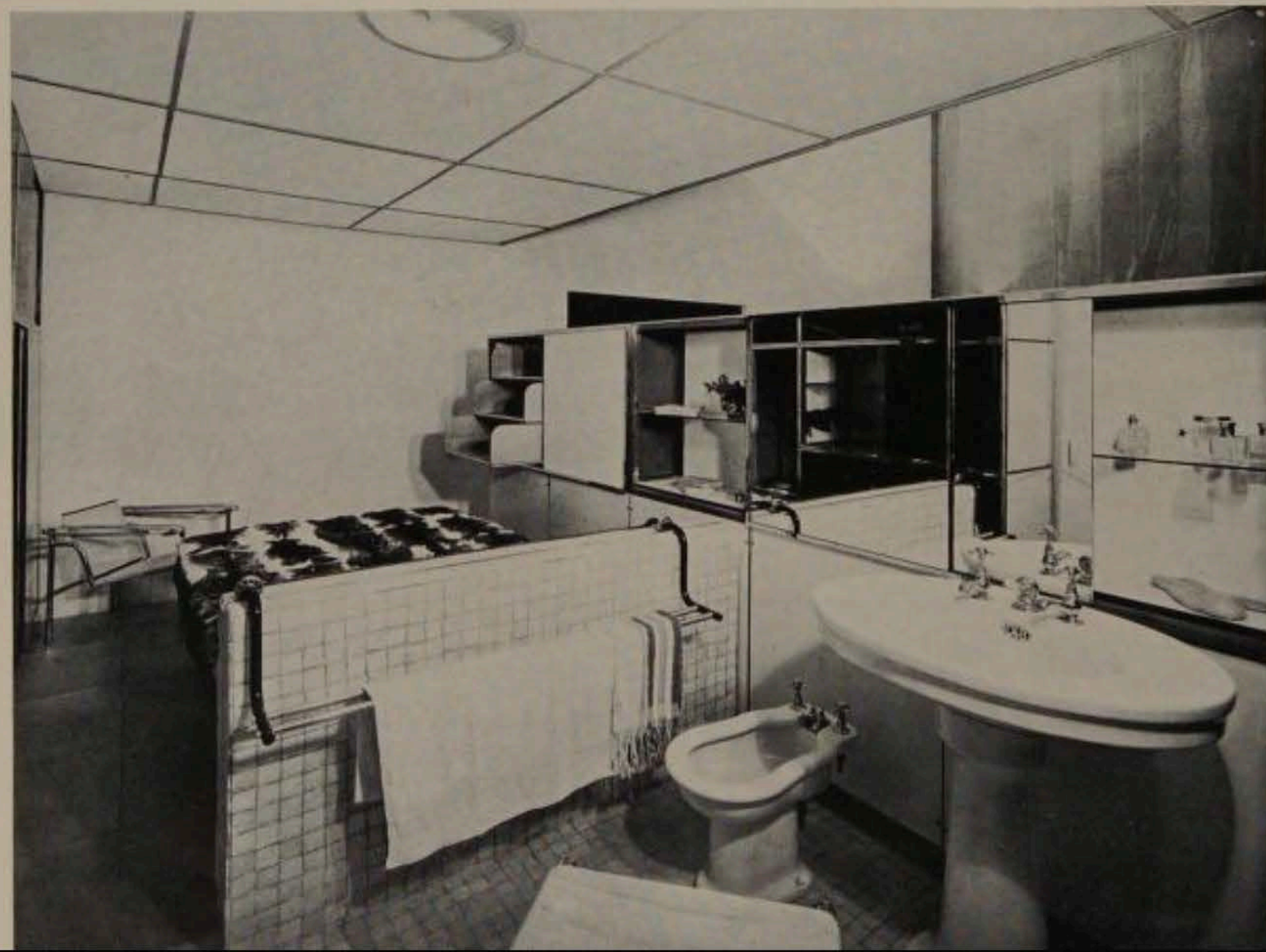
1929. Interior of a model dwelling unit presented at the Salon des Artistes Decorateurs in Paris. The partitions are made of prefabricated, standardized cabinets which provide specific storage space required by the various functions of the rooms: kitchen cabinets, clothes closets, bookcases, etc. If apartments were rented on an area basis, as space is rented in American office buildings, then each family could meet its own sleeping, dining and living-room needs by using these modular, movable cabinet-partitions.



Space for dining

Space for washing and bathing

G. Thiriet

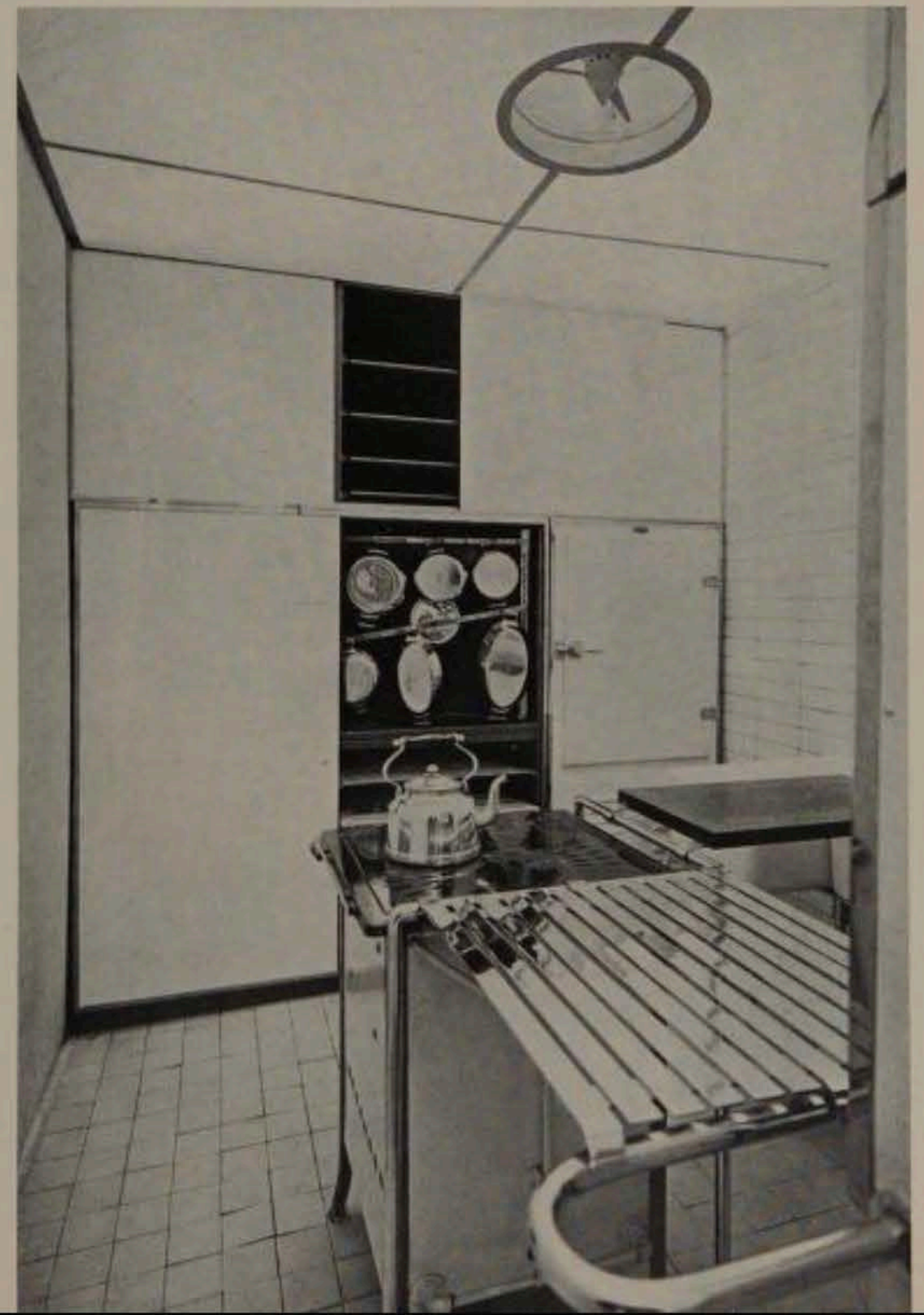


Jean Collas



Space for sleeping

Space for cooking



Jean Collas

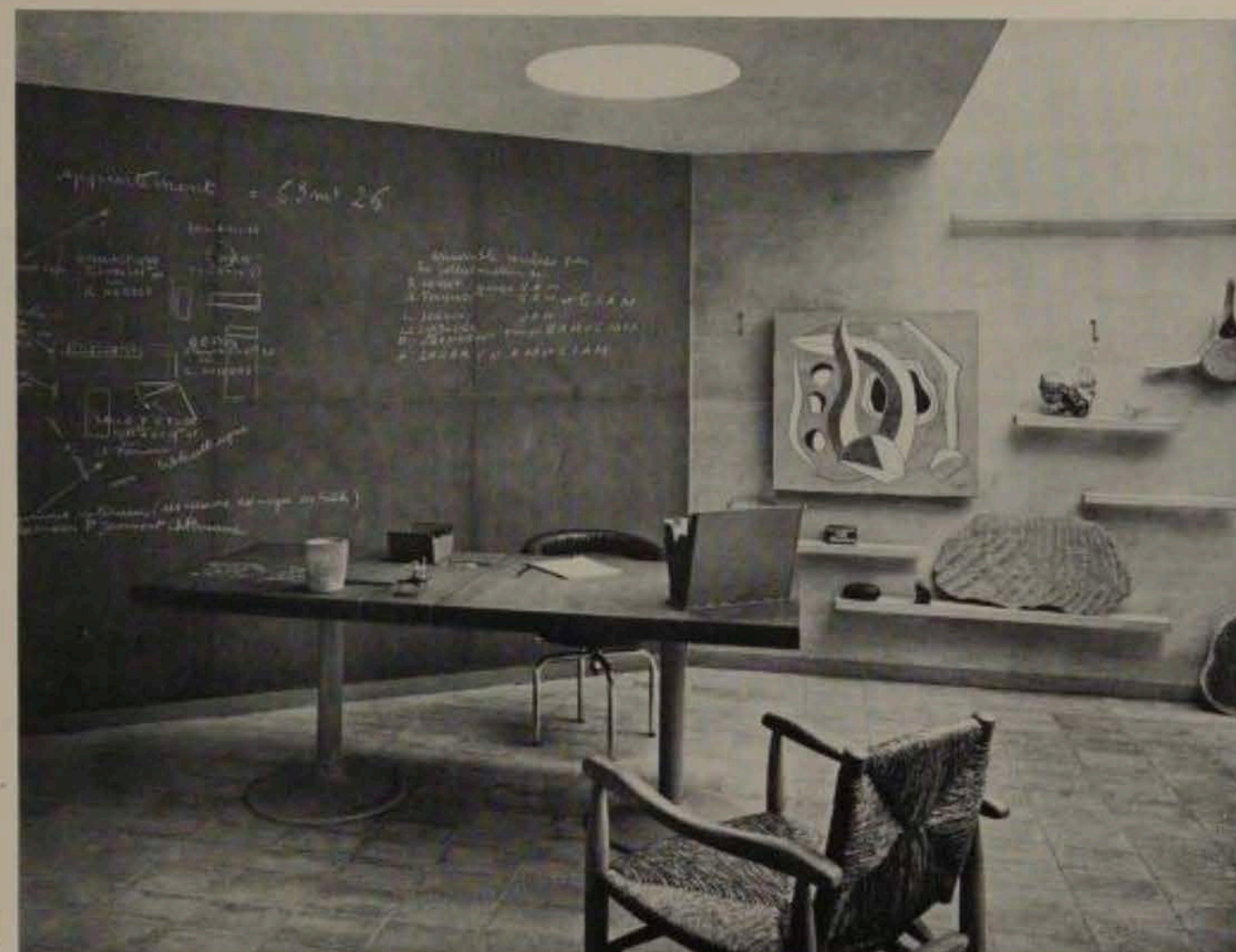


1929. Top: adjustable chaise longue of tubular steel resting on a wooden base. Center: armchair of tubular steel with adjustable back. Bottom: easy chair with pneumatic cushions set in a tubular rigid frame. In collaboration with Charlotte Perriand. Photos: M. Grivot and REP.

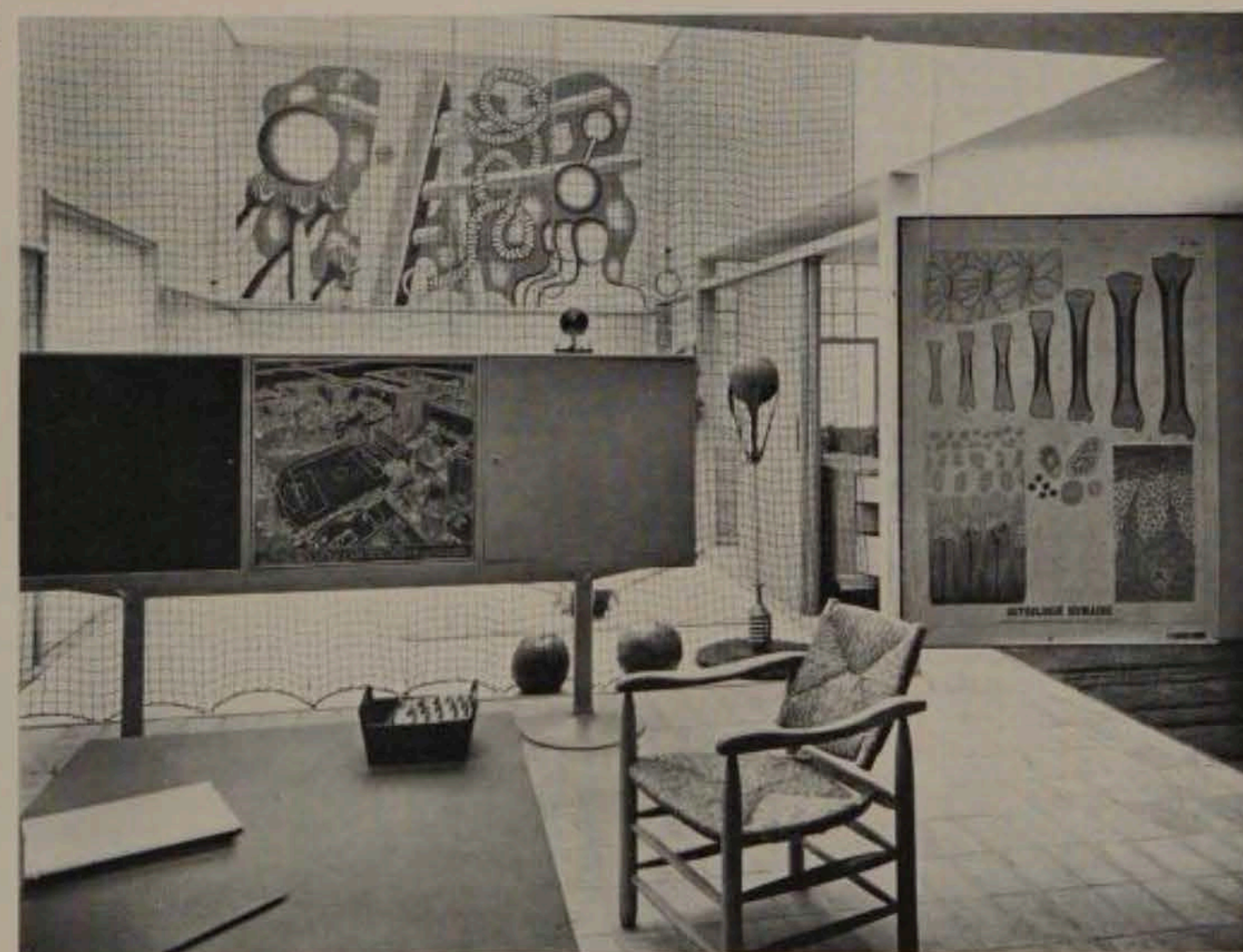


Opposite Page

1935. International Exposition of Brussels. Living-room arrangement with storage cabinets and a multi-use table (eating, reading, games, etc.). In collaboration with Charlotte Perriand.

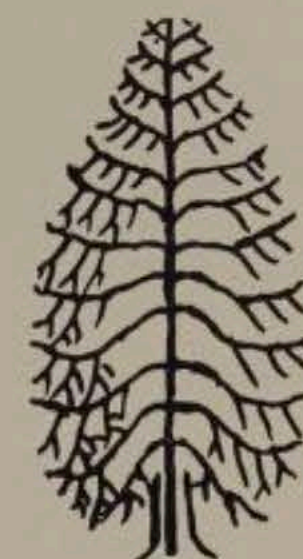
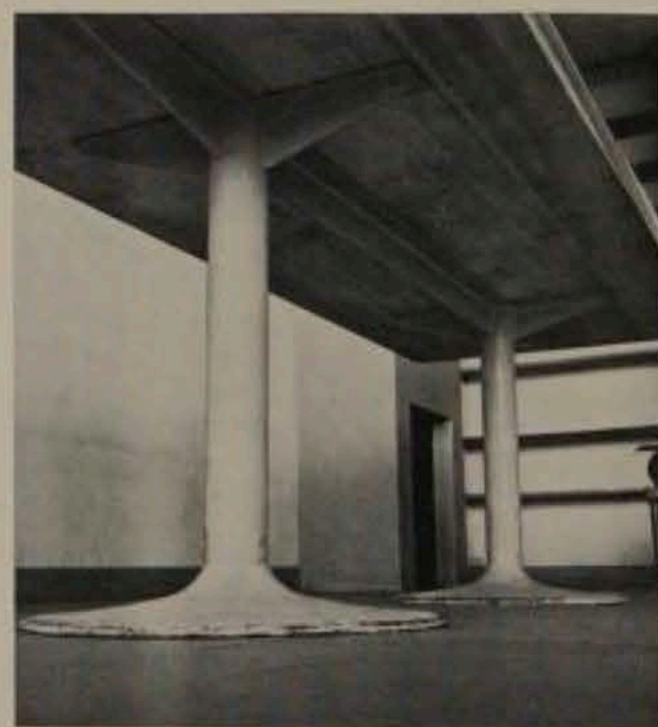


C. Vandenbergh

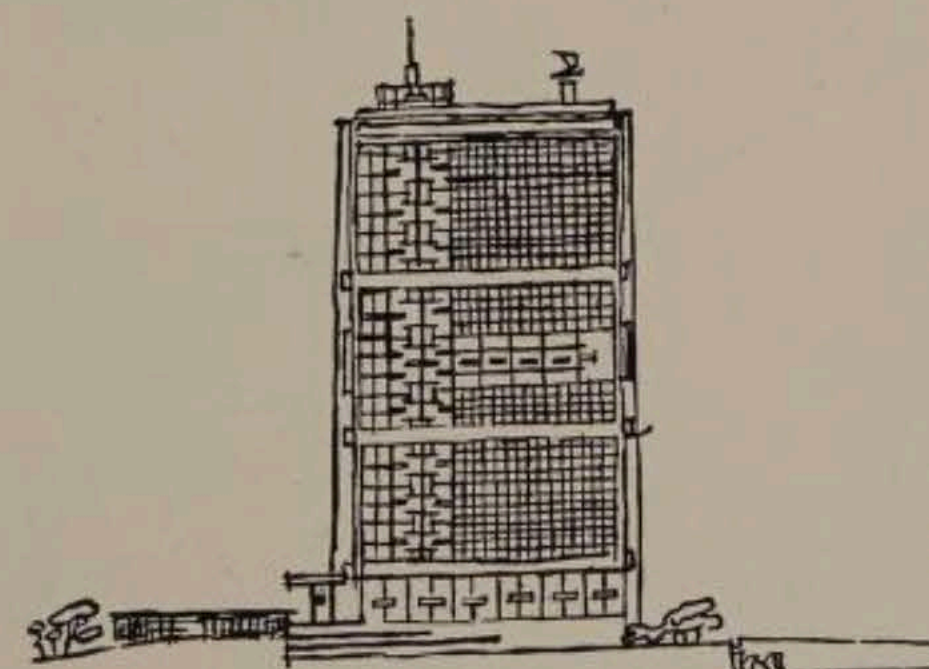


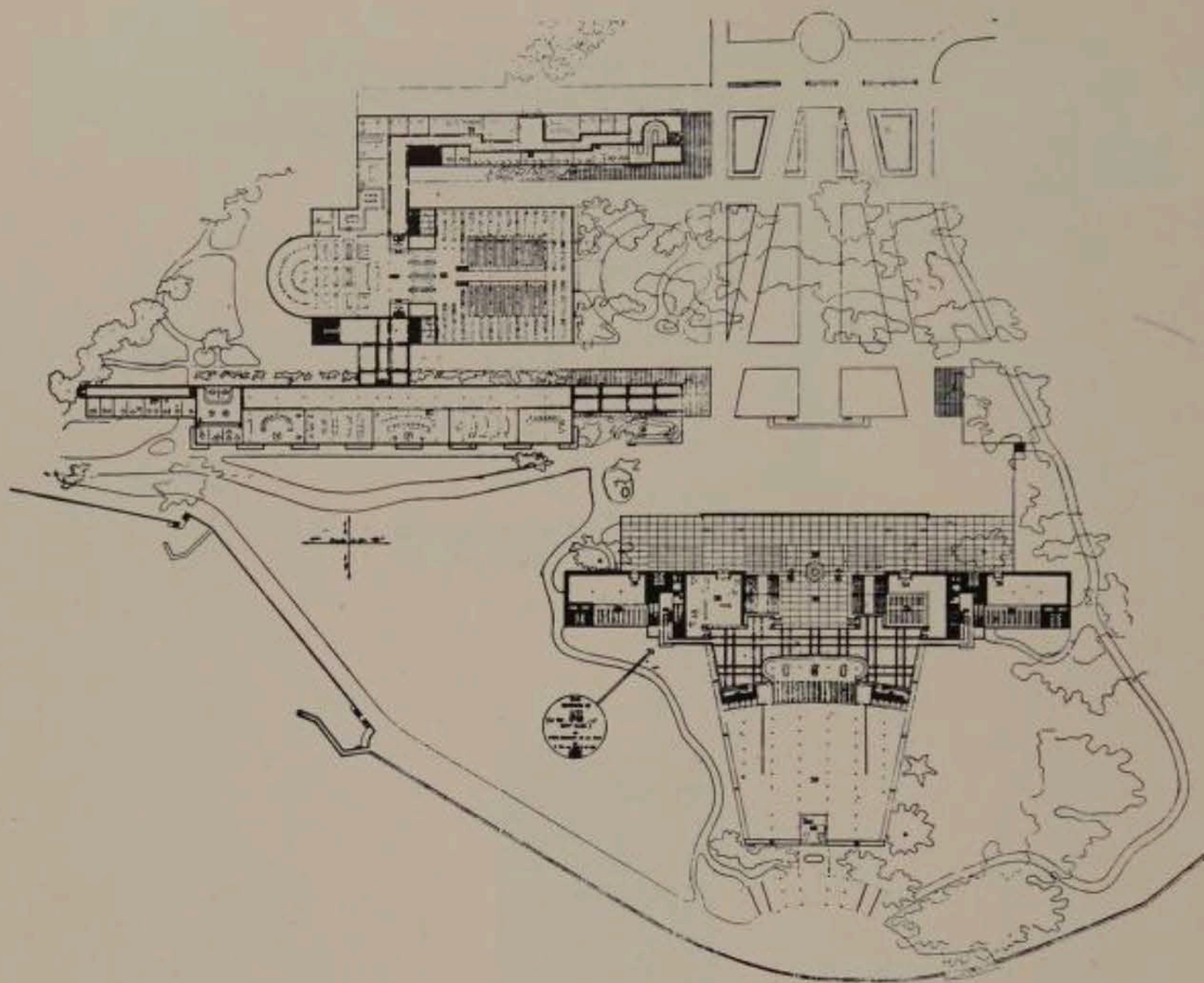


1935. International Exposition of Brussels: Views of Multi-use Table.



3. the major projects

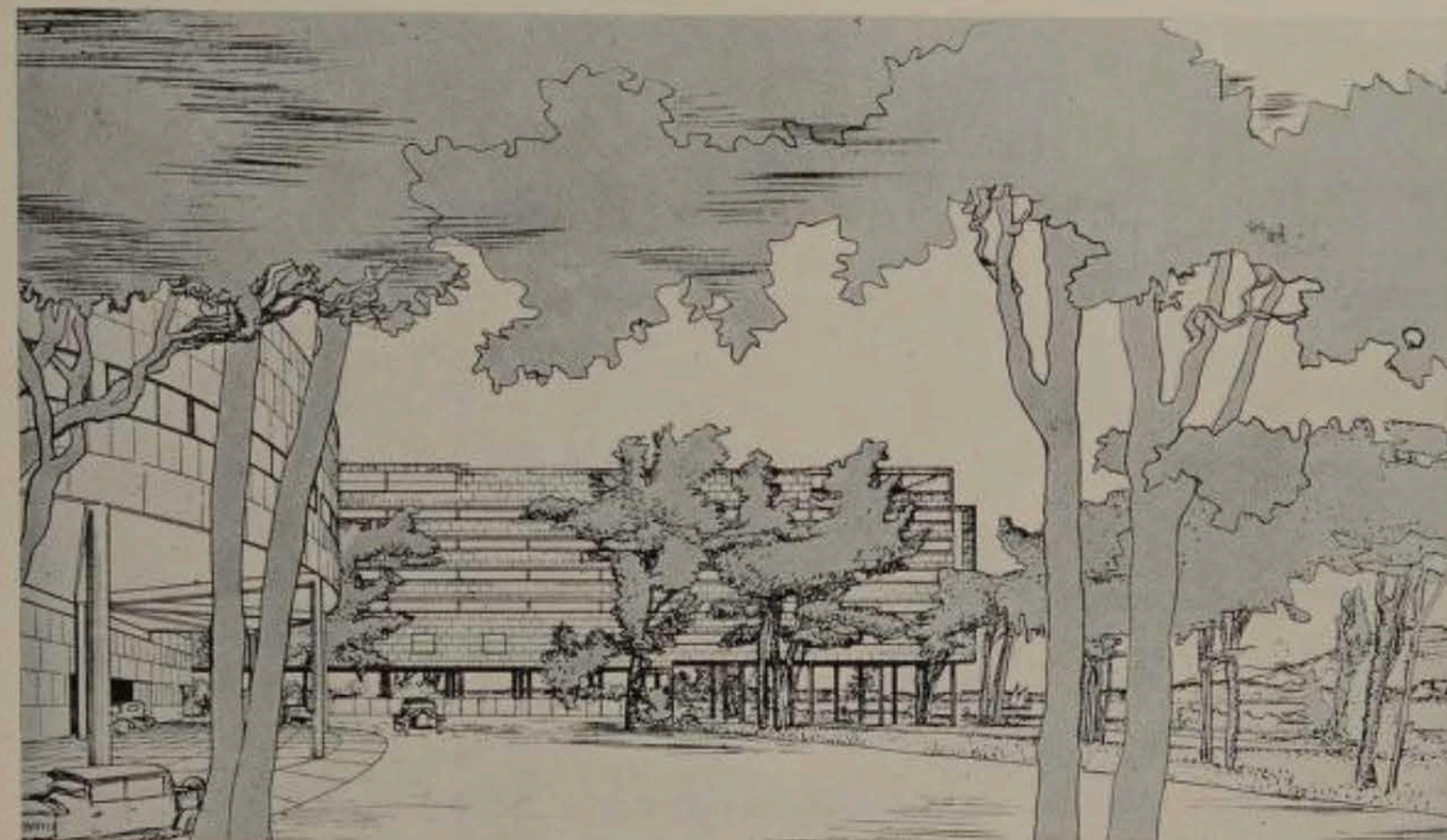




1926. The Palace of the League of Nations. One of the 377 entries of an international competition which was voted first up to the sixty-fifth meeting of the jury. Then, after long deliberations, the ensuing impasse was broken by selecting this entry *ex aequo* with eight additional designs of the most equivocal type. Le Corbusier's project started the first big battle for modern architecture against the academic conceptions of officialdom. The battle was lost, and so was the League of Nations.

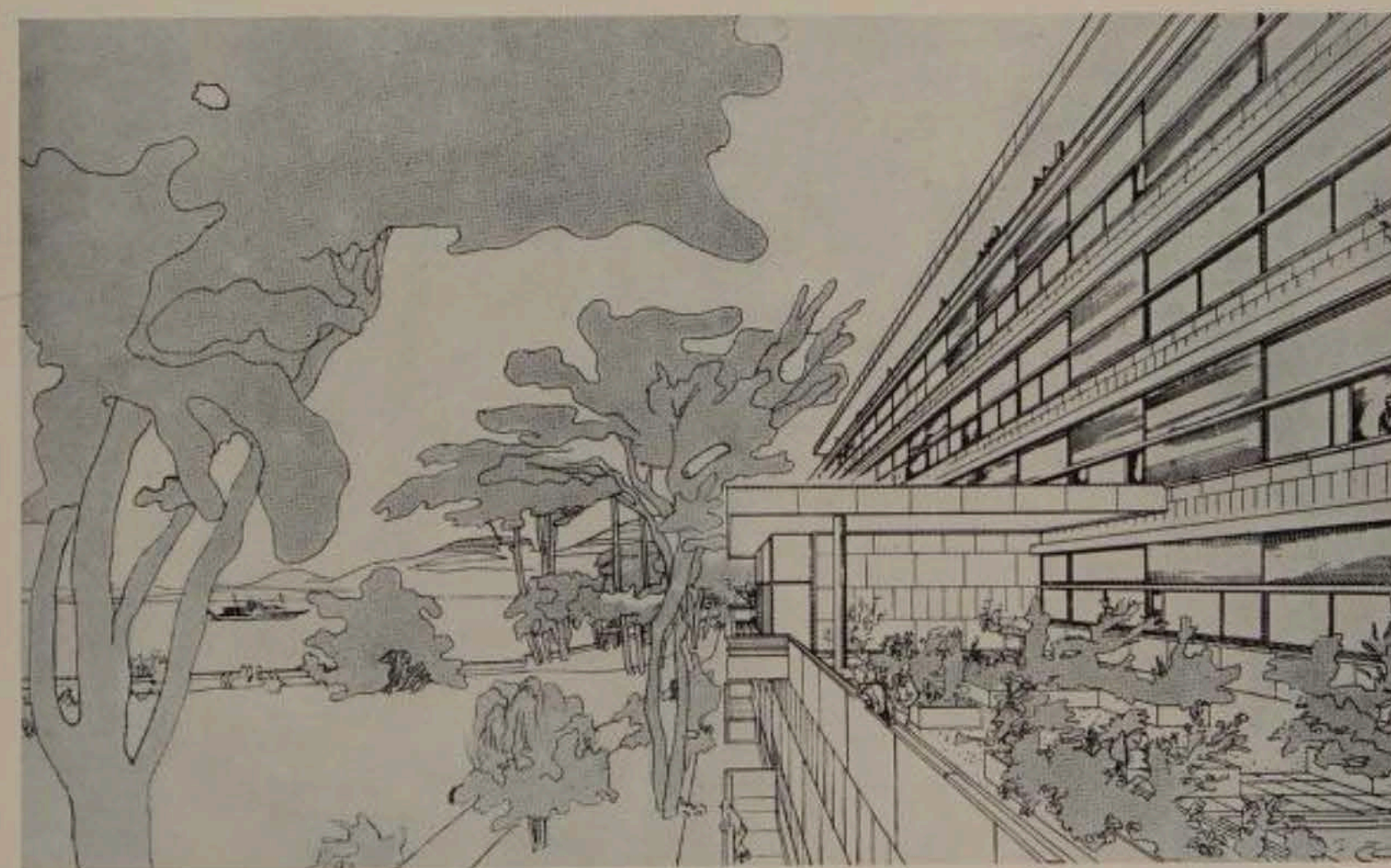
This project, the only one which could be built within the prescribed budget, solved the program requirements without destroying the site so dear to the people of Geneva, while avoiding the use of interior courts and shafts, which are common in administration buildings.

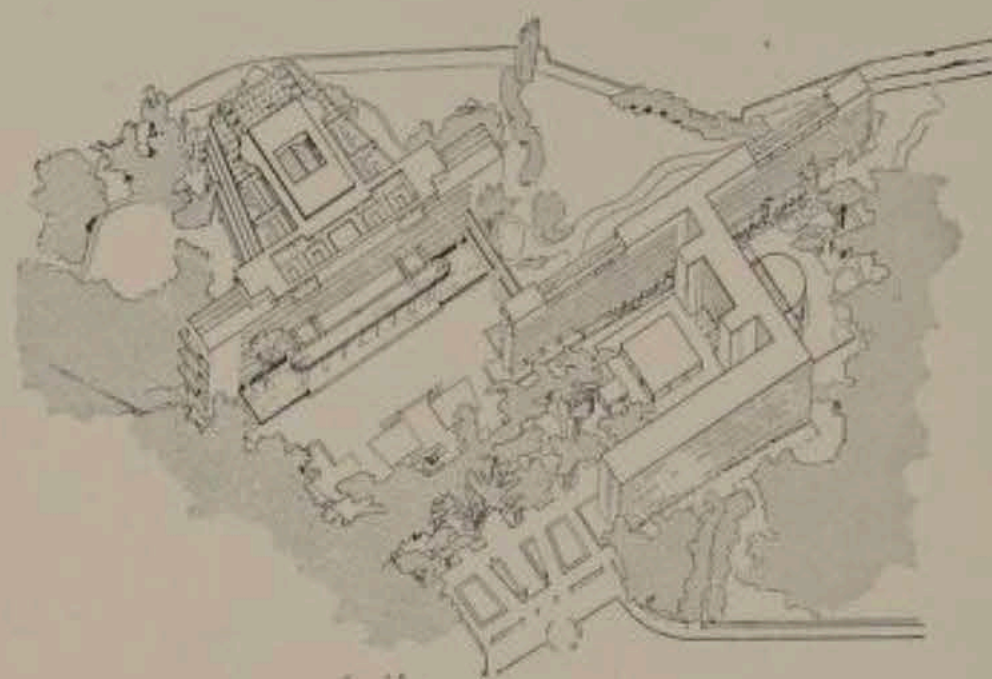
Lower right: the main assembly hall with a seating capacity of 2,600 people and smaller halls for the principal committees. At the upper left: the secretariat with 500 offices and the library.



Parking space is provided on the ground floor

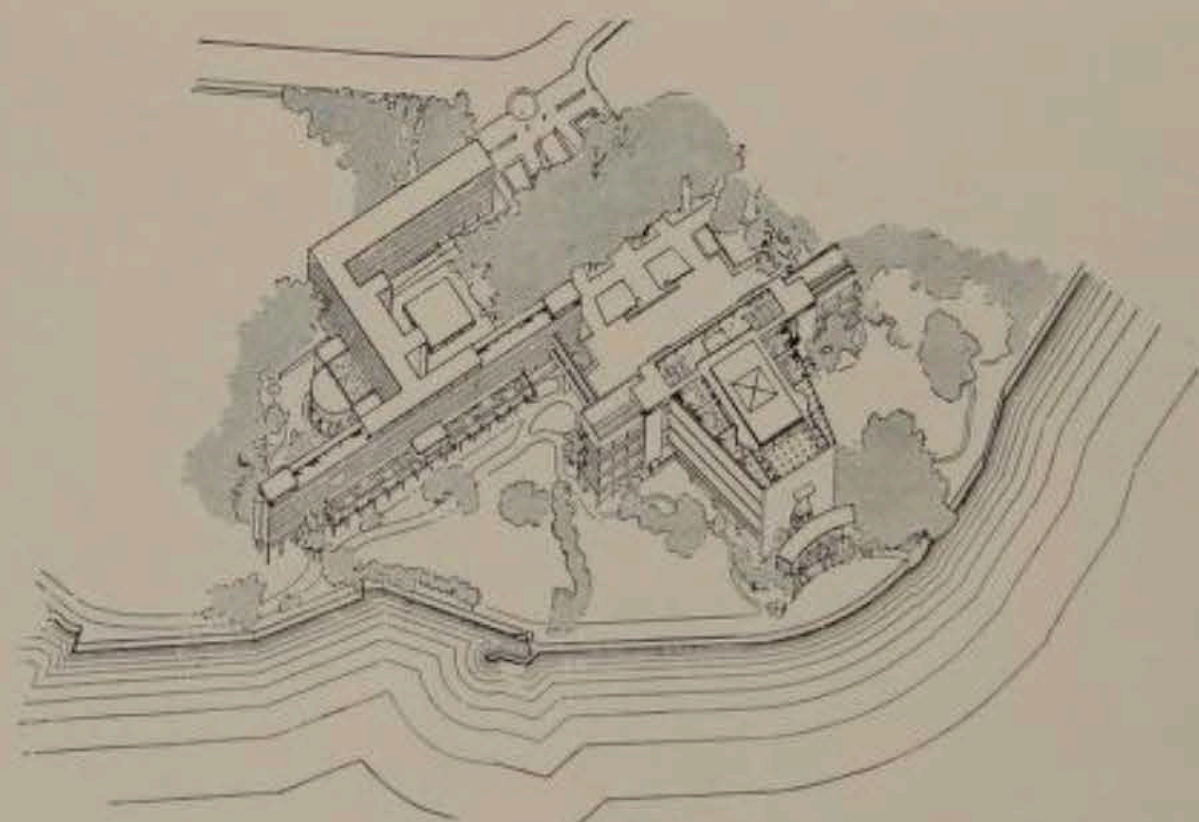
The building of the secretariat and of the minor commissions



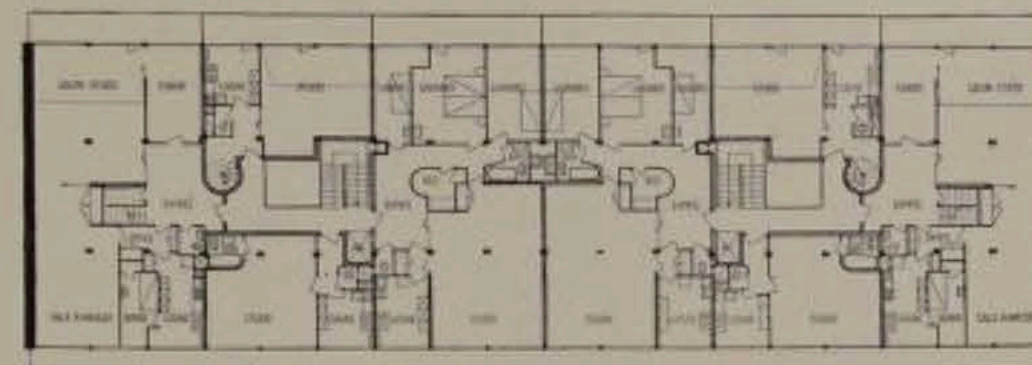


View from the route to Lausanne

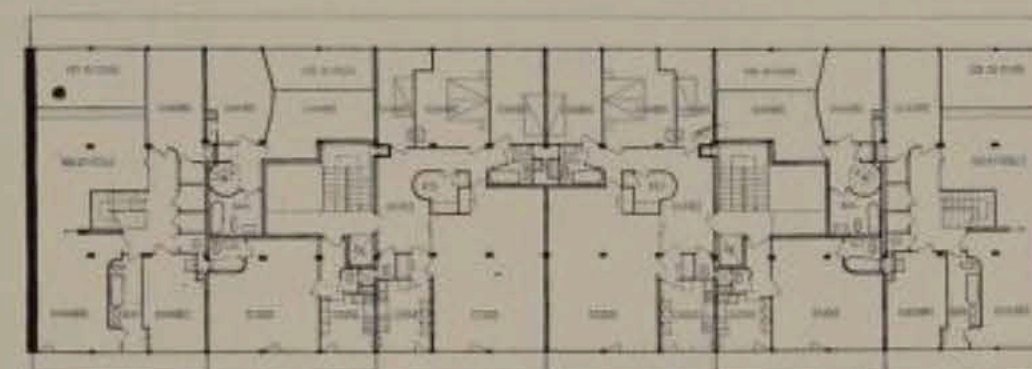
The president's pavilion and the assembly hall face the lake.



1st Level



2nd Level

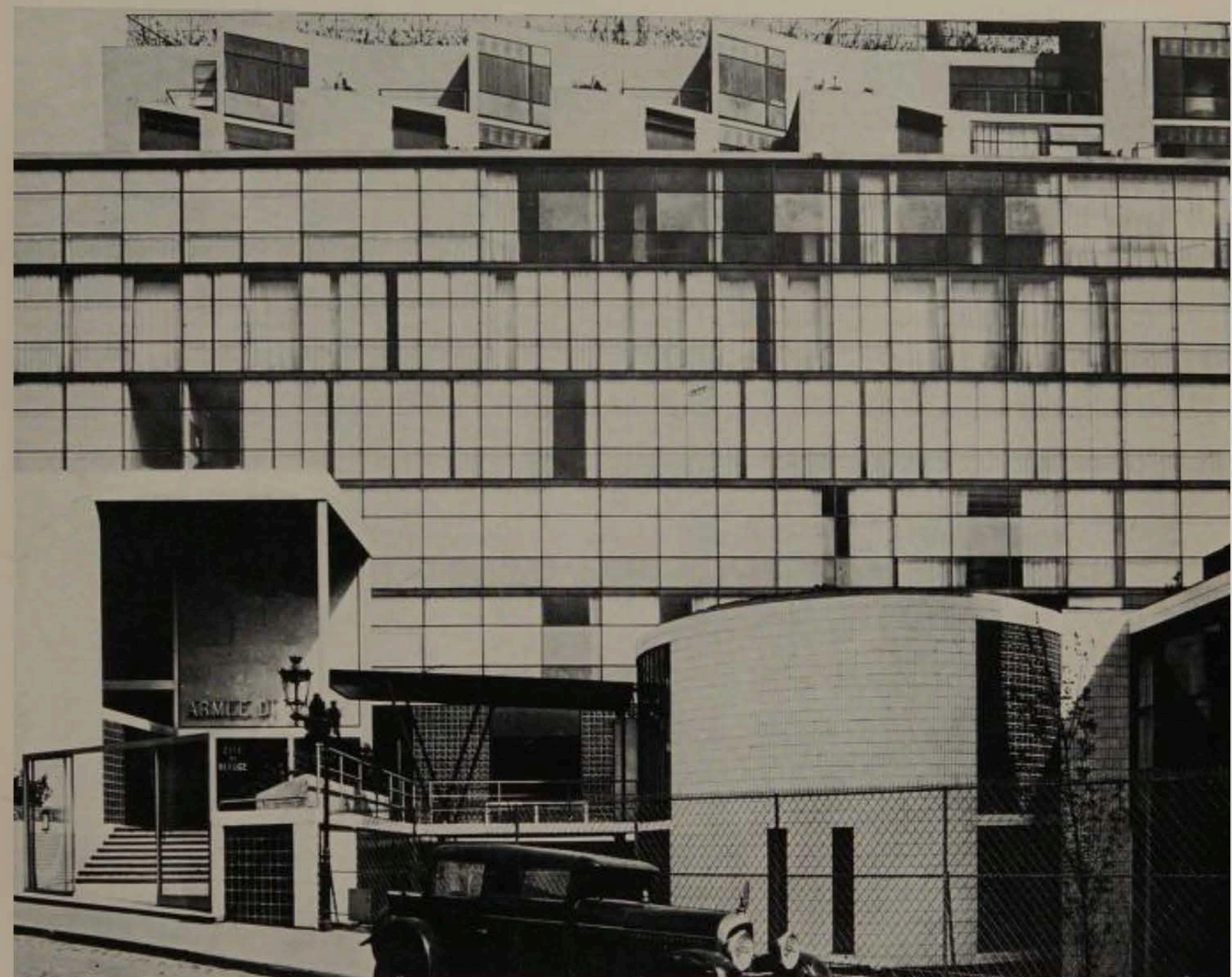
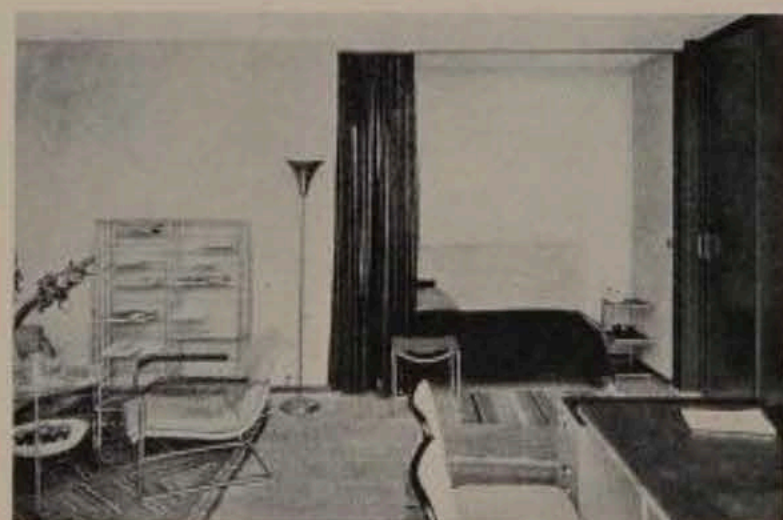


1928-1932, Clarté Apartments in Geneva. Some of the ideas originally expressed in the Pavilion of the New Spirit in 1925 are developed further in this block of forty-five single-story and duplex apartments. The glass façade is protected with outside venetian blinds of the rolling type.



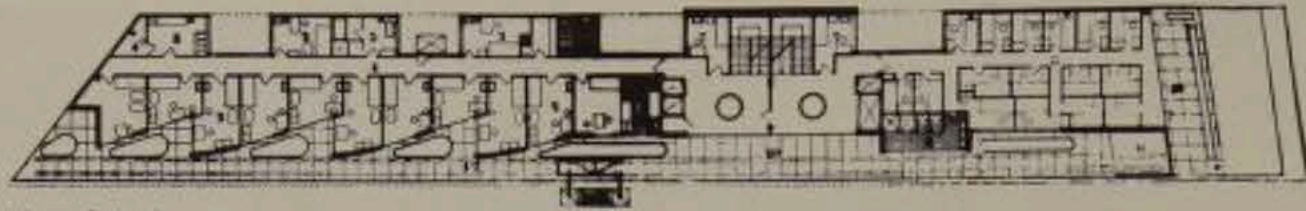


Interior views of a duplex apartment taken from under the balcony and from the two-story-high window. The minimum height is 8' 4" and the maximum 16' 8".

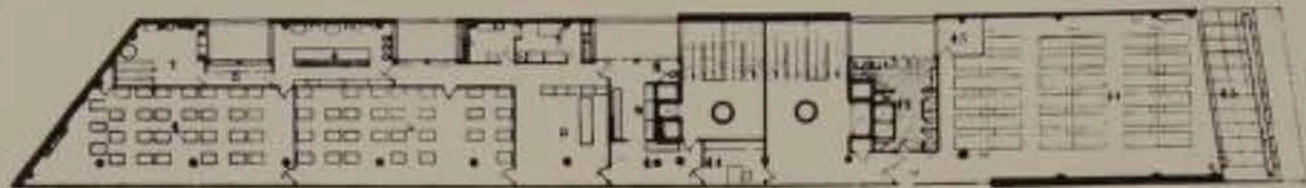


Museum of Modern Art

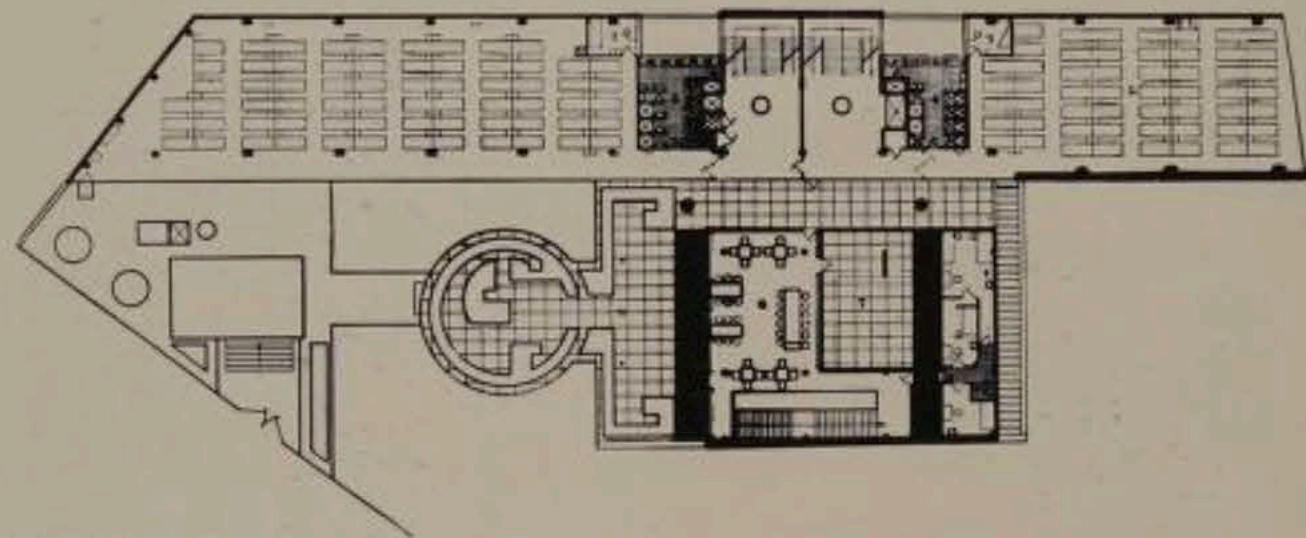
1929-1931. Dormitories for the Salvation Army, Paris. This building houses the social services of the Salvation Army and a mess hall. Five hundred beds are located in dormitories, single rooms and in rooms for mother and child. The 3,600 square feet of glass façade is airtight, the entire building being air-conditioned.



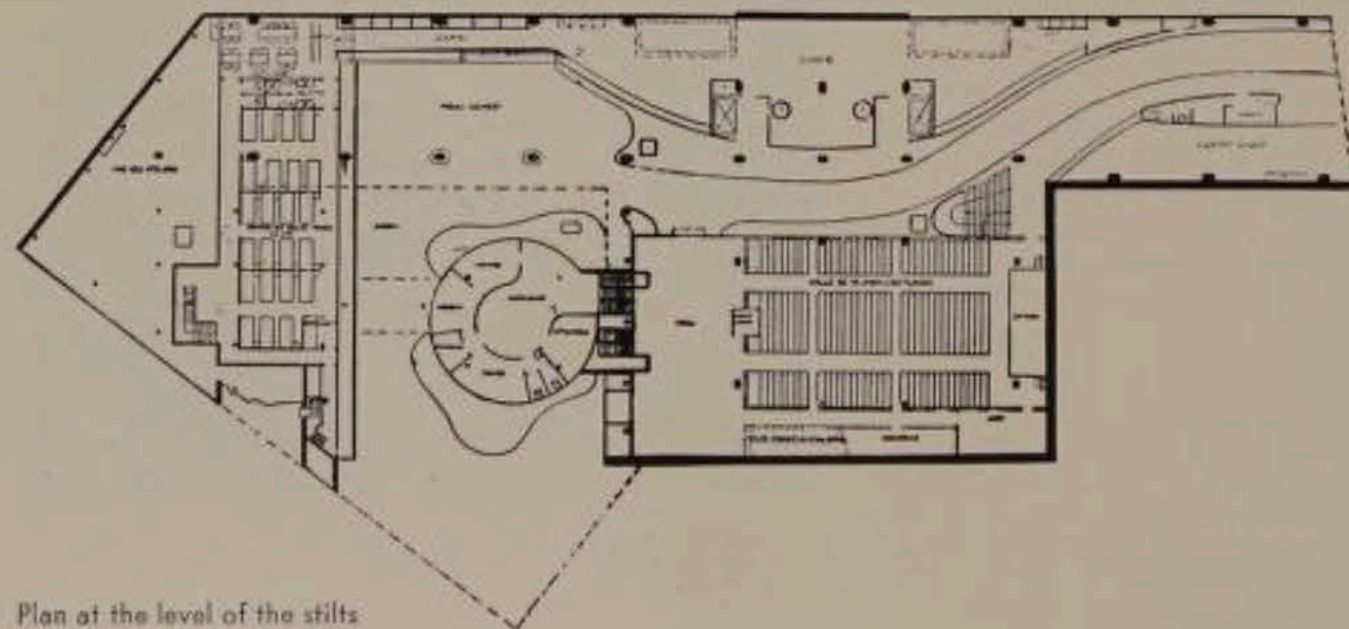
Plan of single rooms



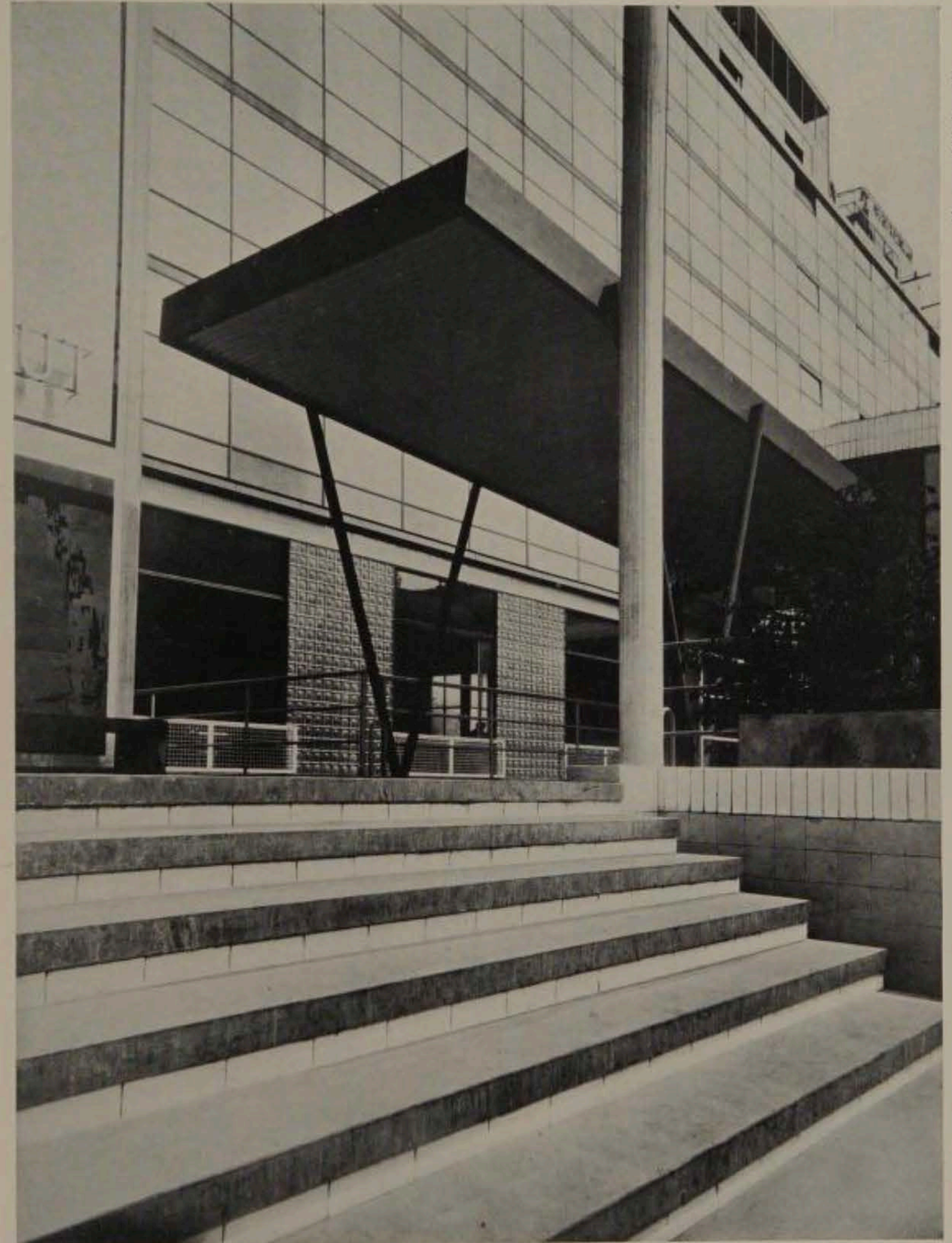
Plan of rooms for mother and child



Plan of dormitories



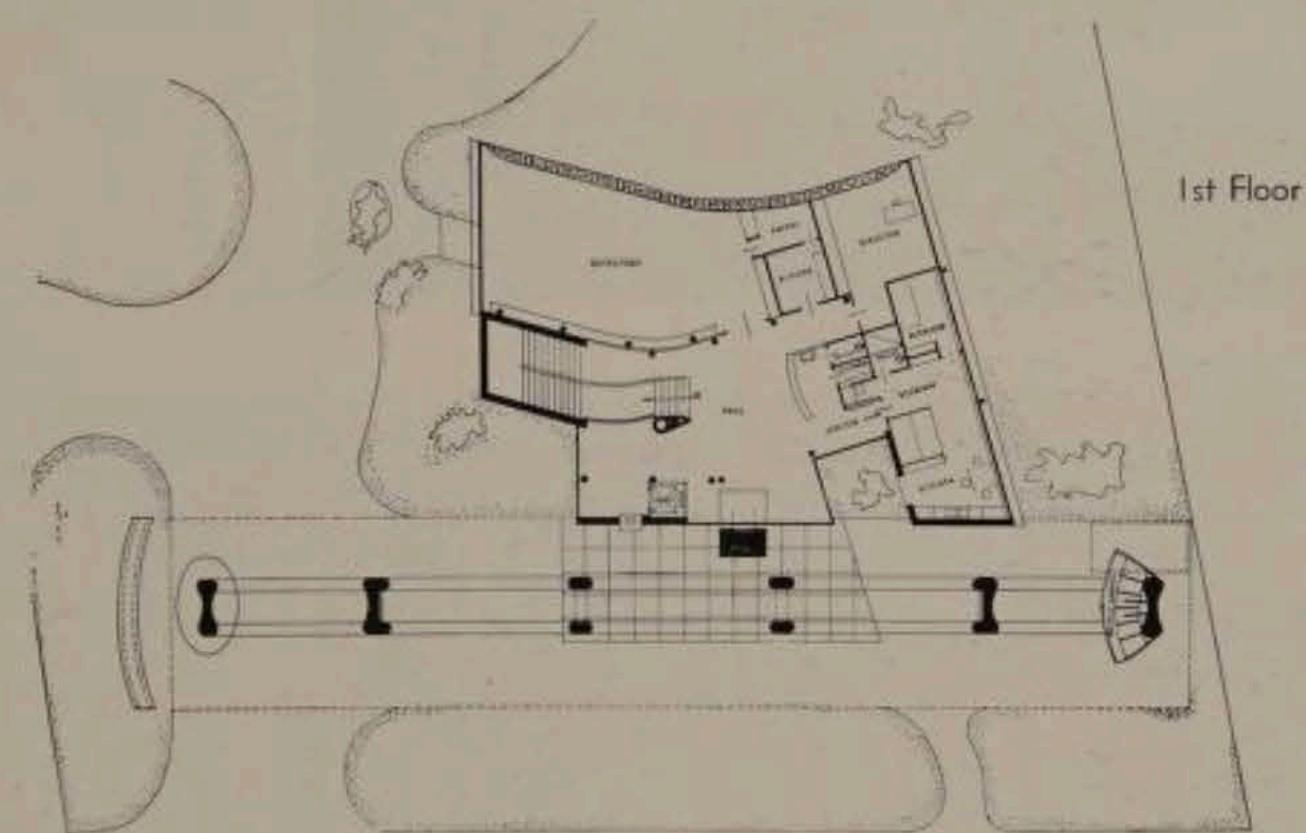
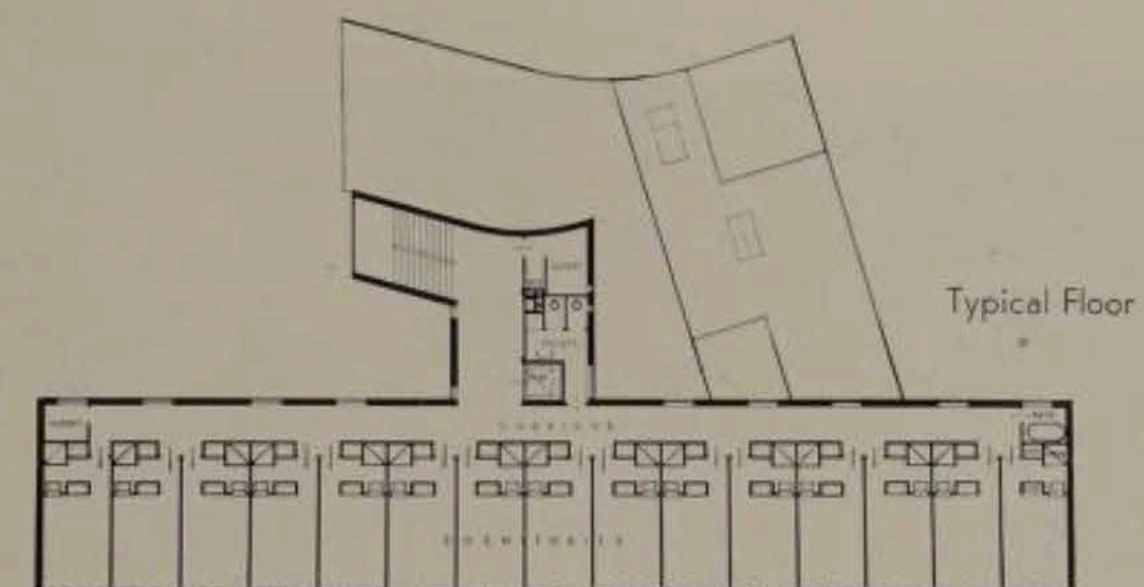
Plan at the level of the stilts



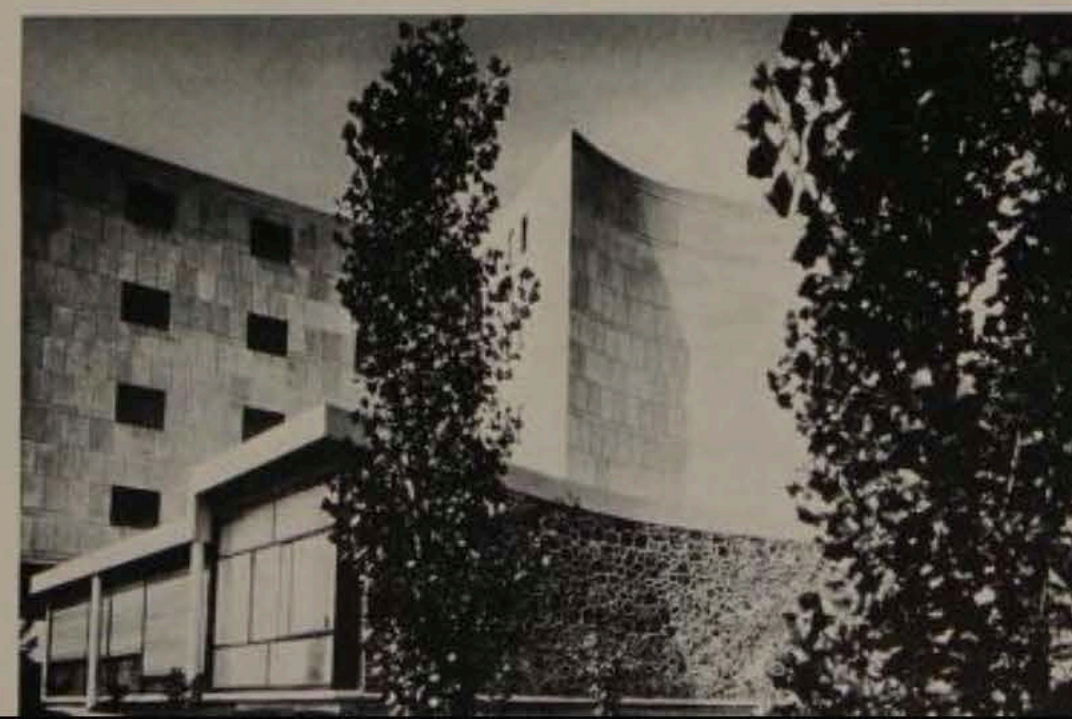
The main entrance



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1931-1933. Dormitory building for Swiss students at the University City in Paris. Lounge, library and mess hall are located on the ground floor; single rooms for students are provided in three consecutive floors. Small penthouse apartments are for faculty members. Below: façade facing north.





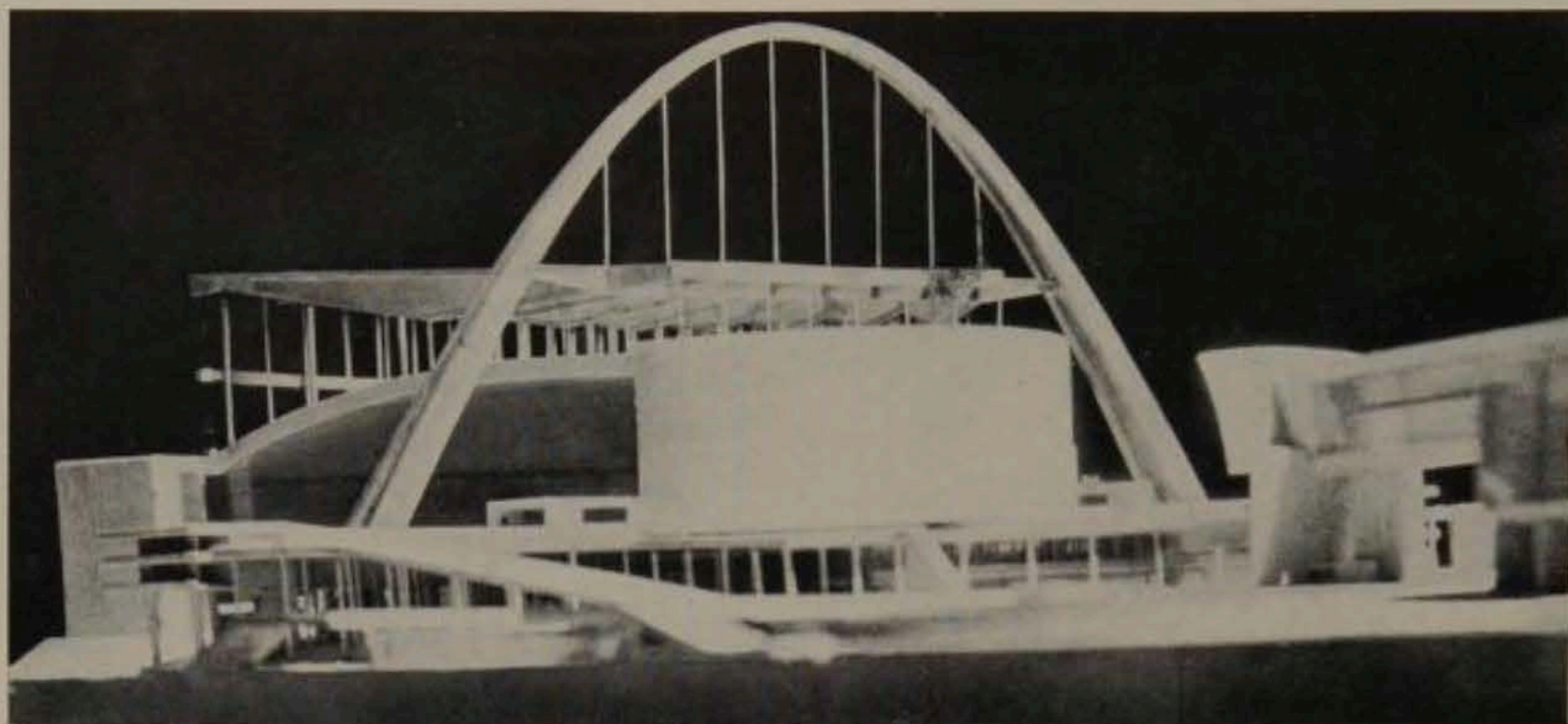
The major part of the ground floor is for outdoor living

The entrance hall

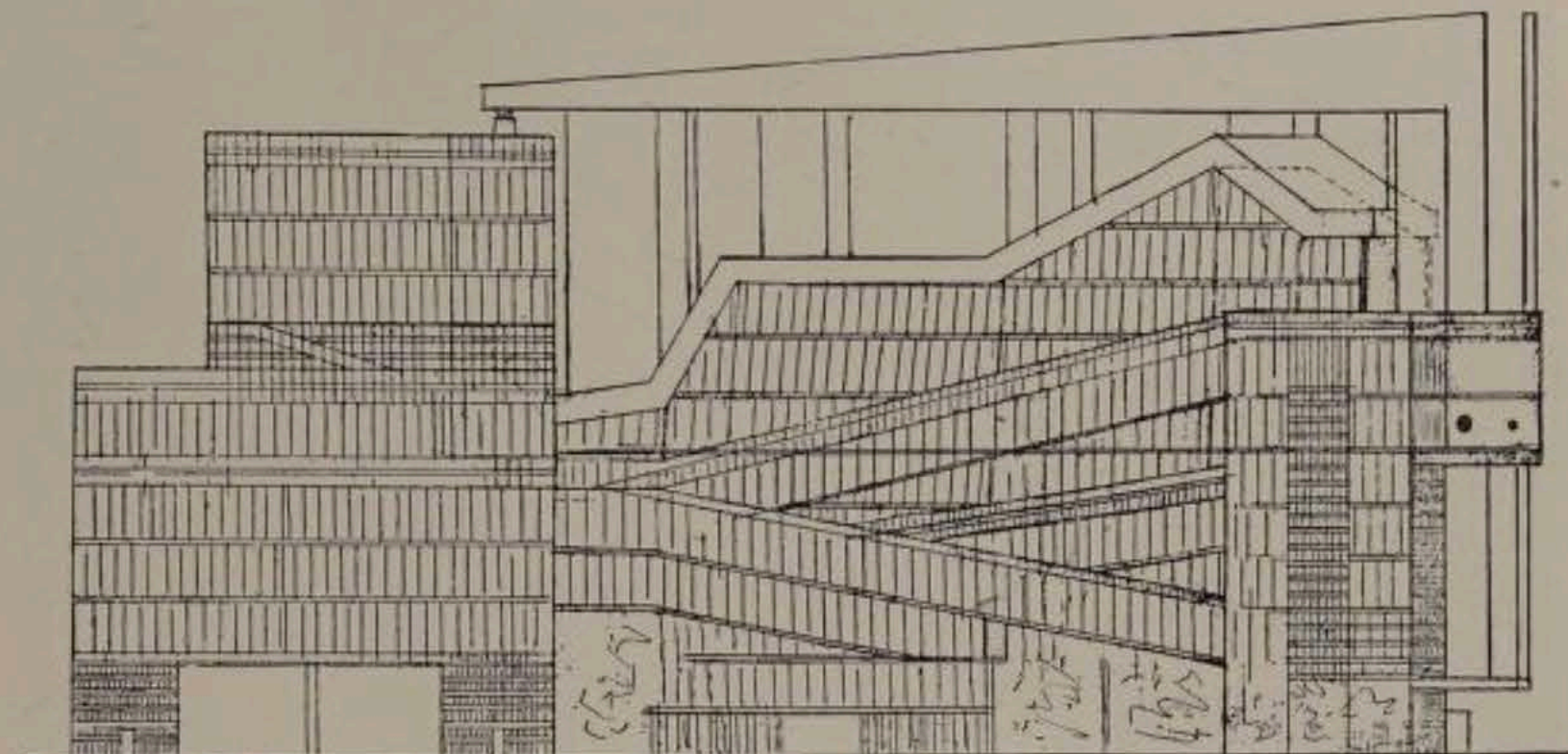
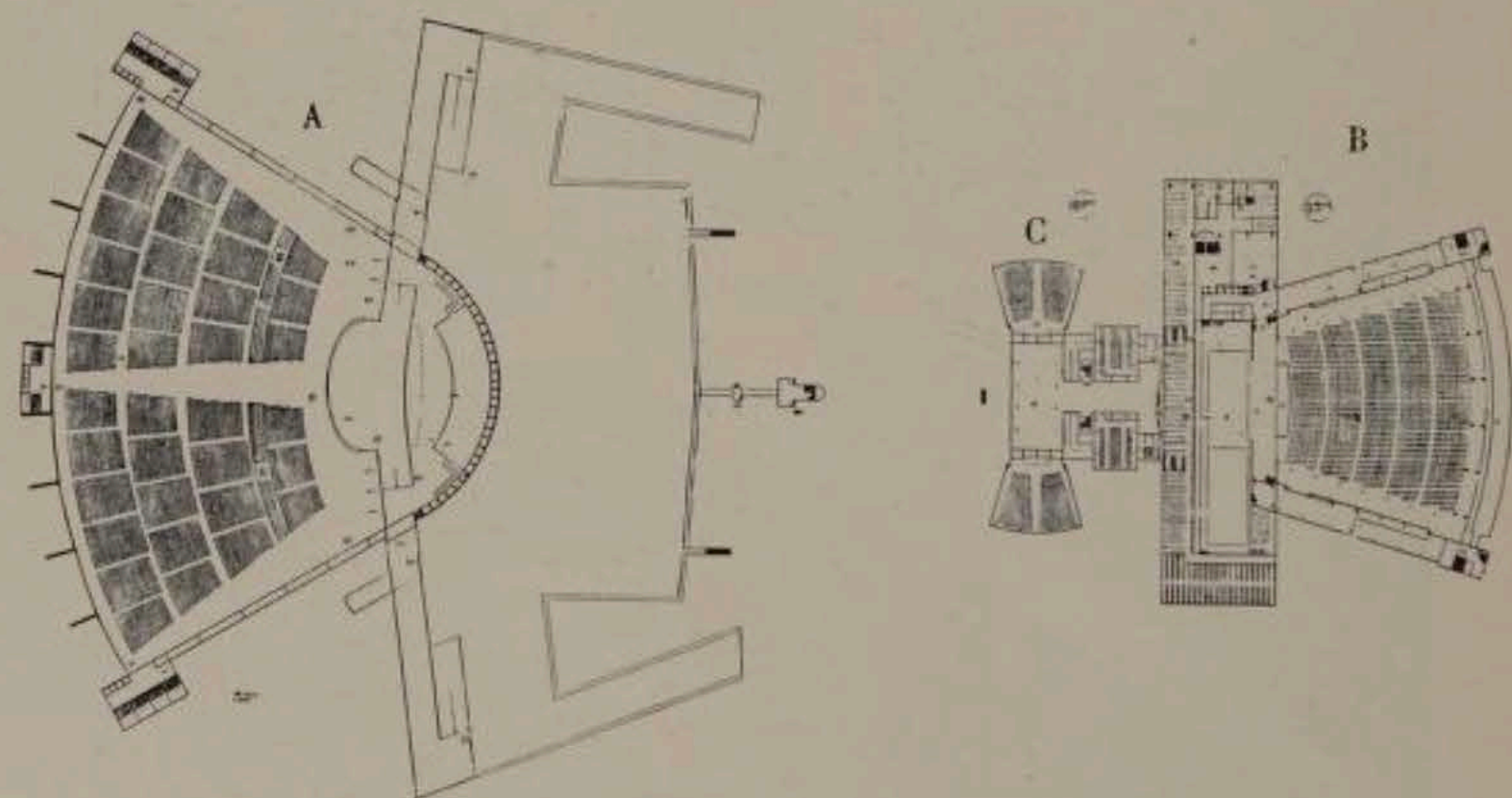


1931. Project for the Palace of the Soviets. Le Corbusier was invited by the government of the U.S.S.R. to develop this project following the basic elements of his design for the Palace of the League of Nations. The program included an auditorium for 15,000 people, one for 6,000, four smaller halls with a seating capacity of 500 and 200, an outdoor meeting place for 50,000 people, and a parking garage for 500 cars. The elevation above shows the roofs of the two main assembly halls before the final study for the acoustics was made.



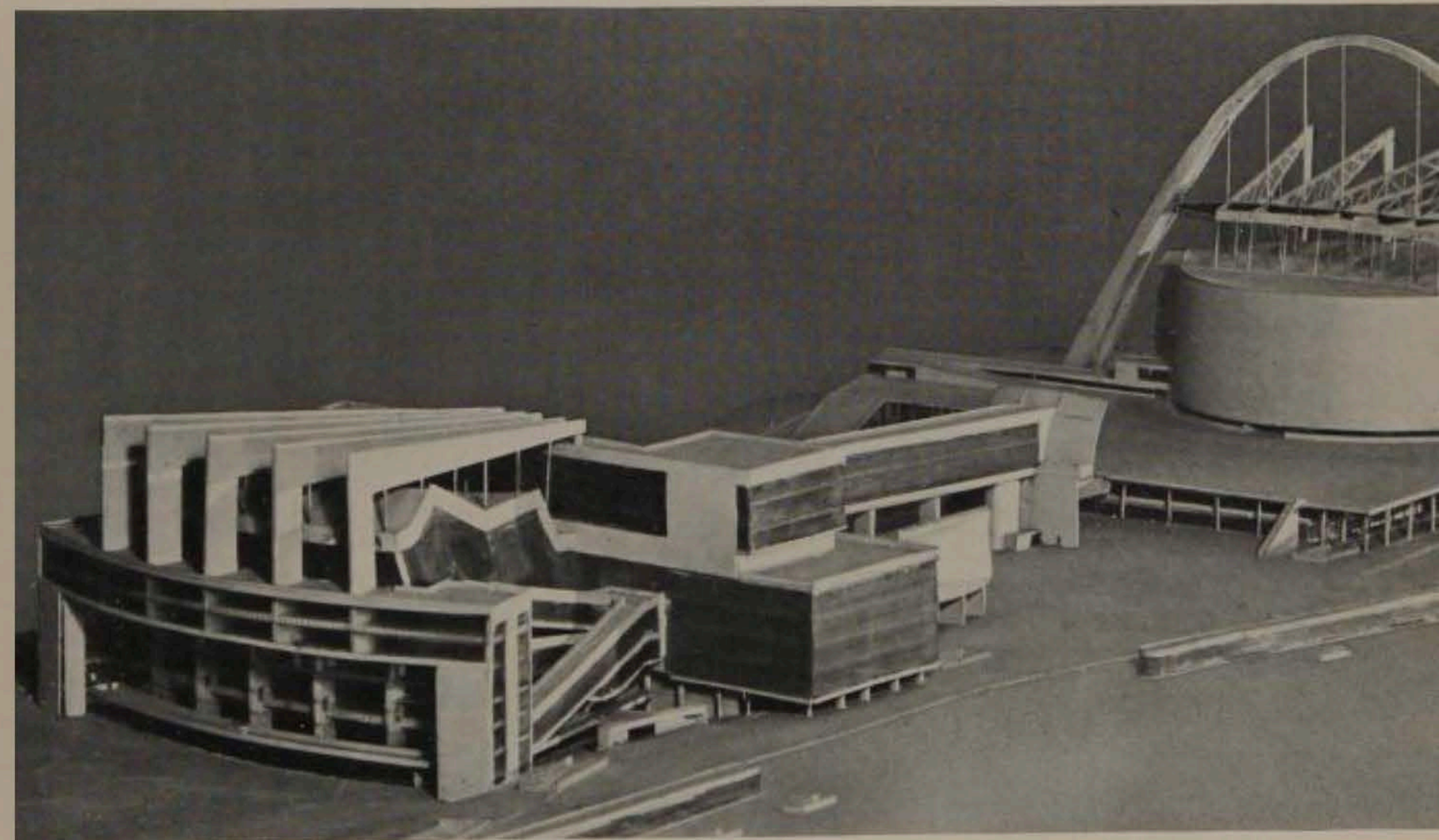


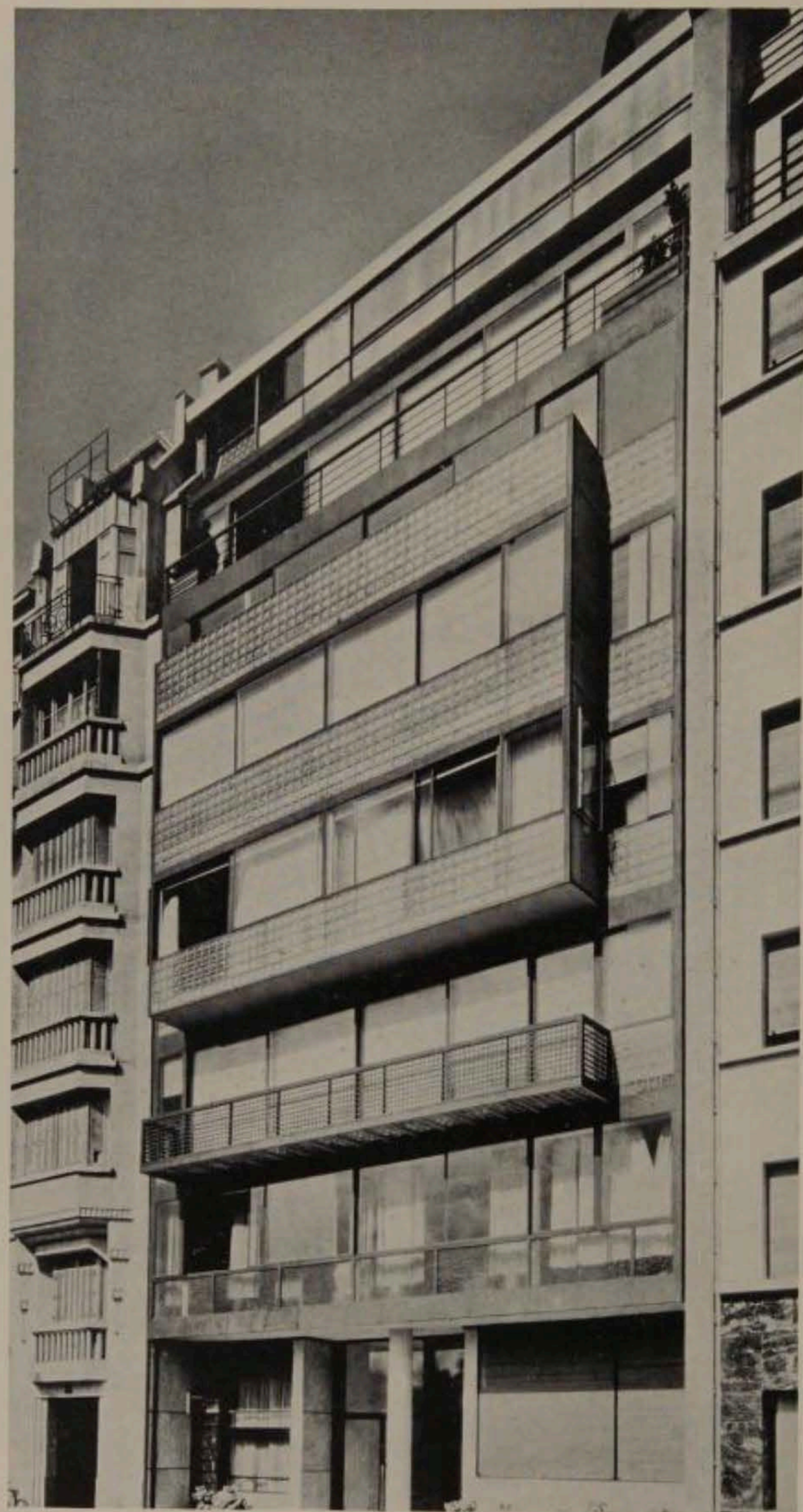
Model of the main auditorium showing the suspended acoustical roof. The plan shows the main auditorium (A) with the platform and speaker's stand for the outdoor meetings. On the right is (B), the auditorium for 6,000, and (C), the small assembly halls.



Façade showing the final design for the acoustical roof of the smaller auditorium designed with the collaboration of G. Lyon, M. Marin, and M. Marty, engineers.

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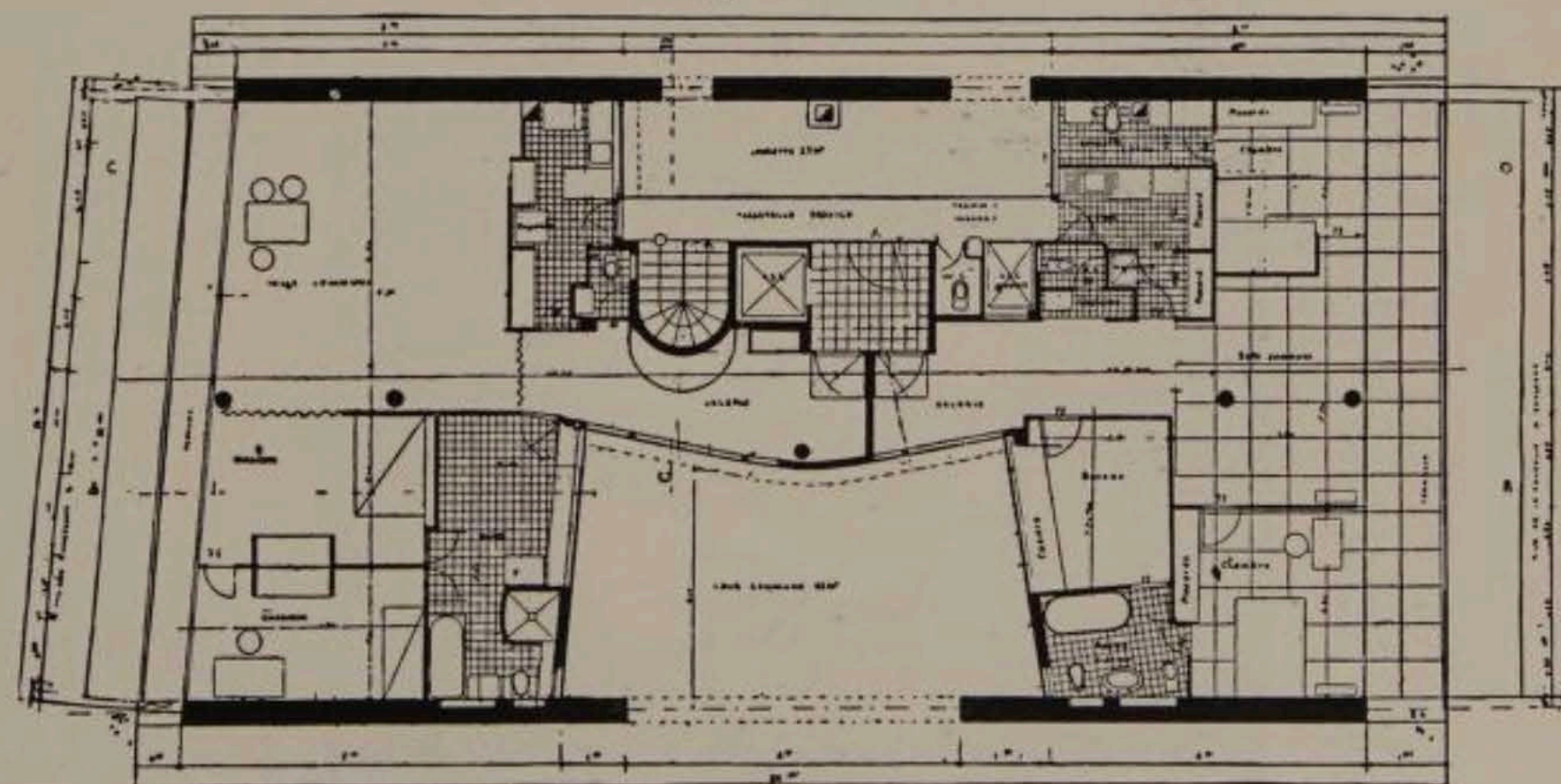
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1932. Apartment house at Boulogne sur Seine. Built on a forty-foot-wide lot, this building contains twelve dwelling units, two on each floor. Le Corbusier's own quarters occupy the two top floors of the building. Above: interior view of a typical apartment.

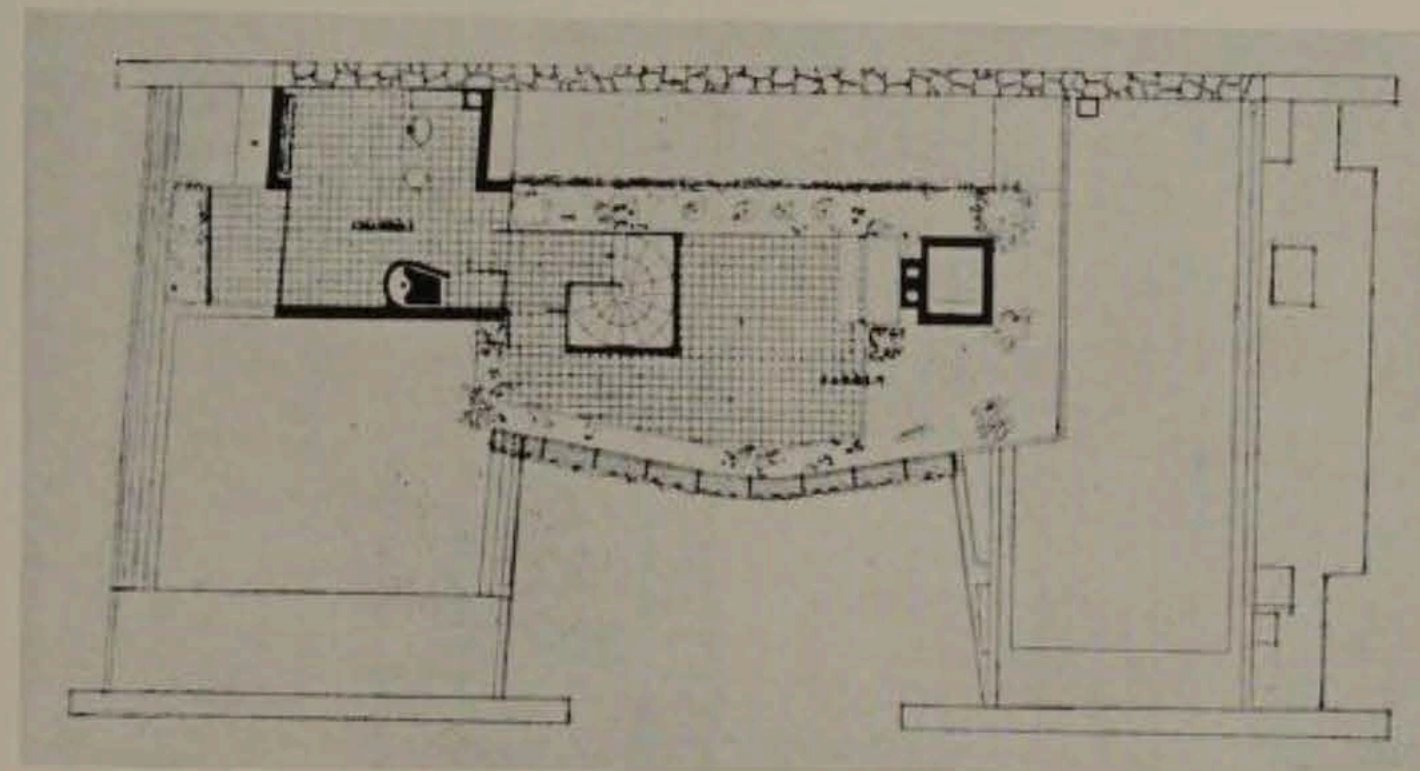
Typical Floor Plan



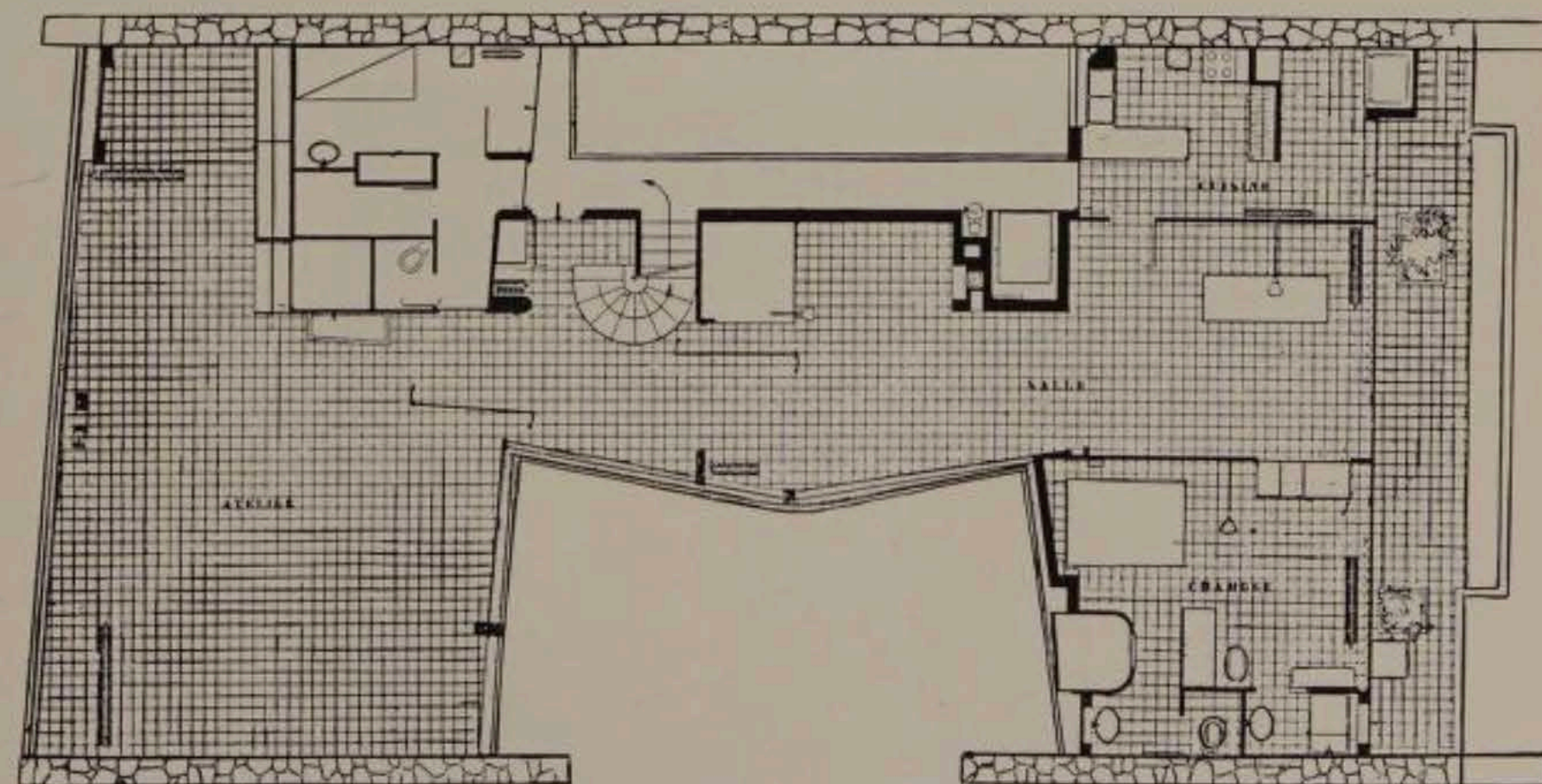


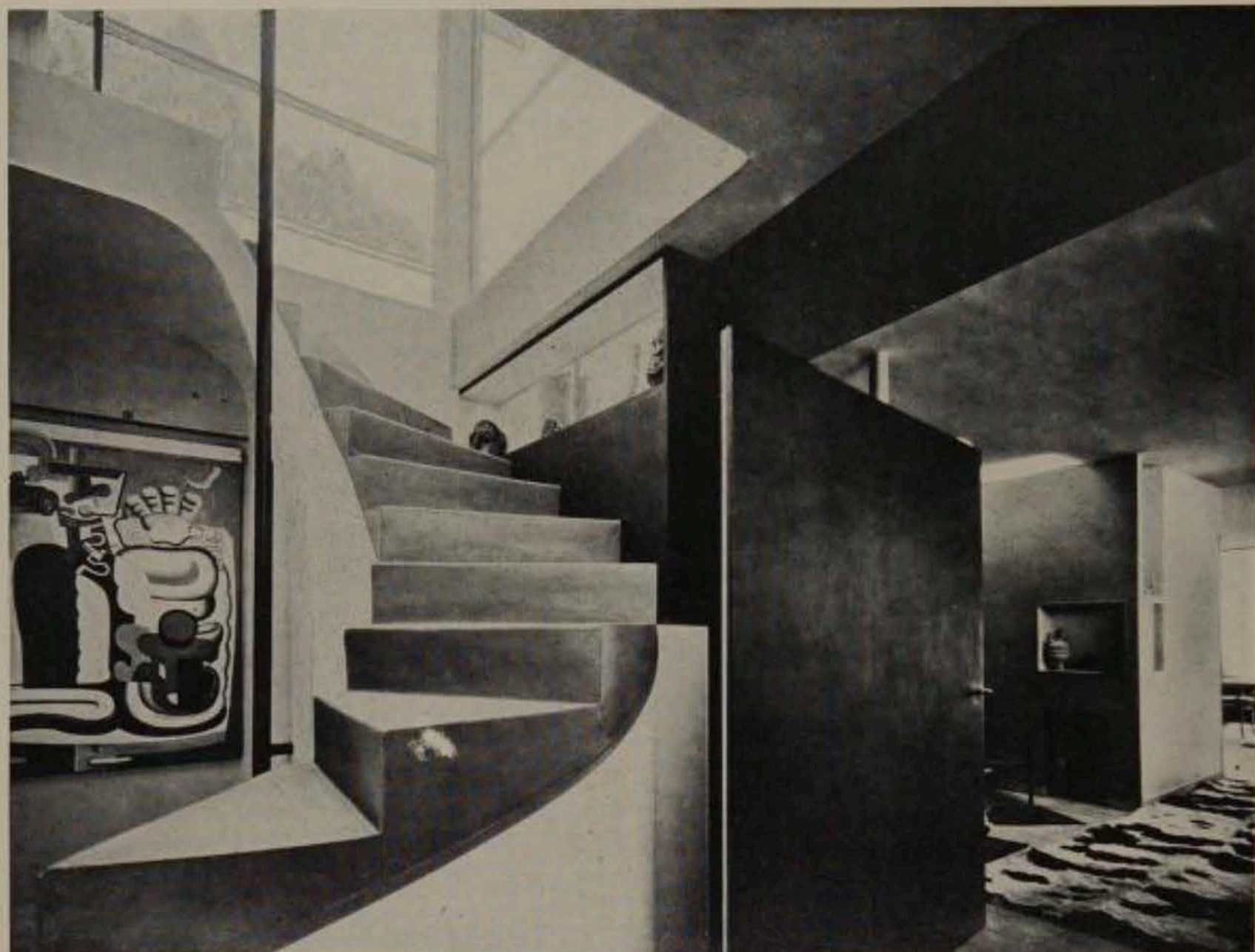
View of Le Corbusier's studio showing the unplastered party wall and, below, another view of a typical apartment

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Plans of Le Corbusier's apartment: the studio and the living quarters are distinctly separated.



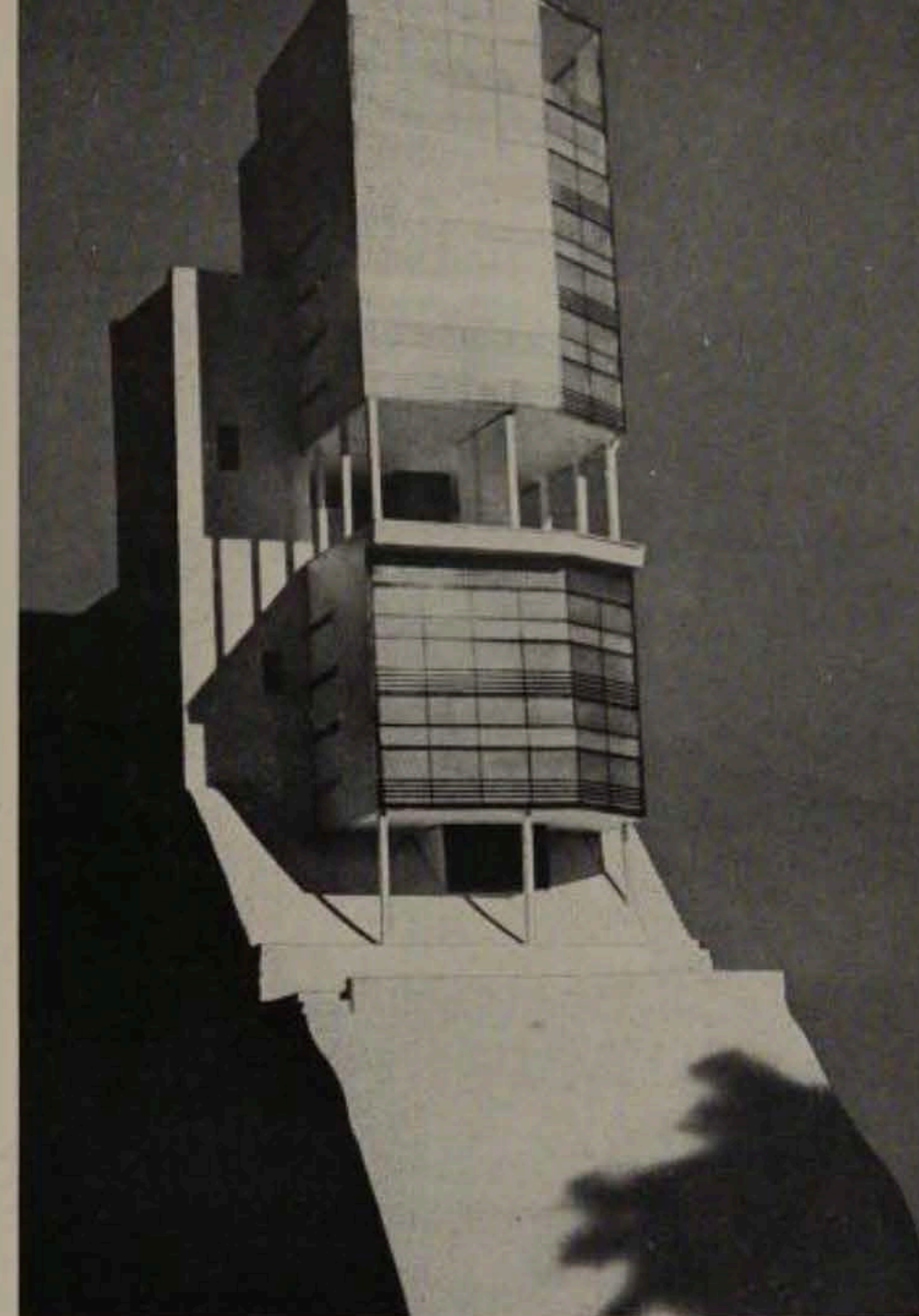


Entrance to Le Corbusier's living quarters and, below, view of the dining space.

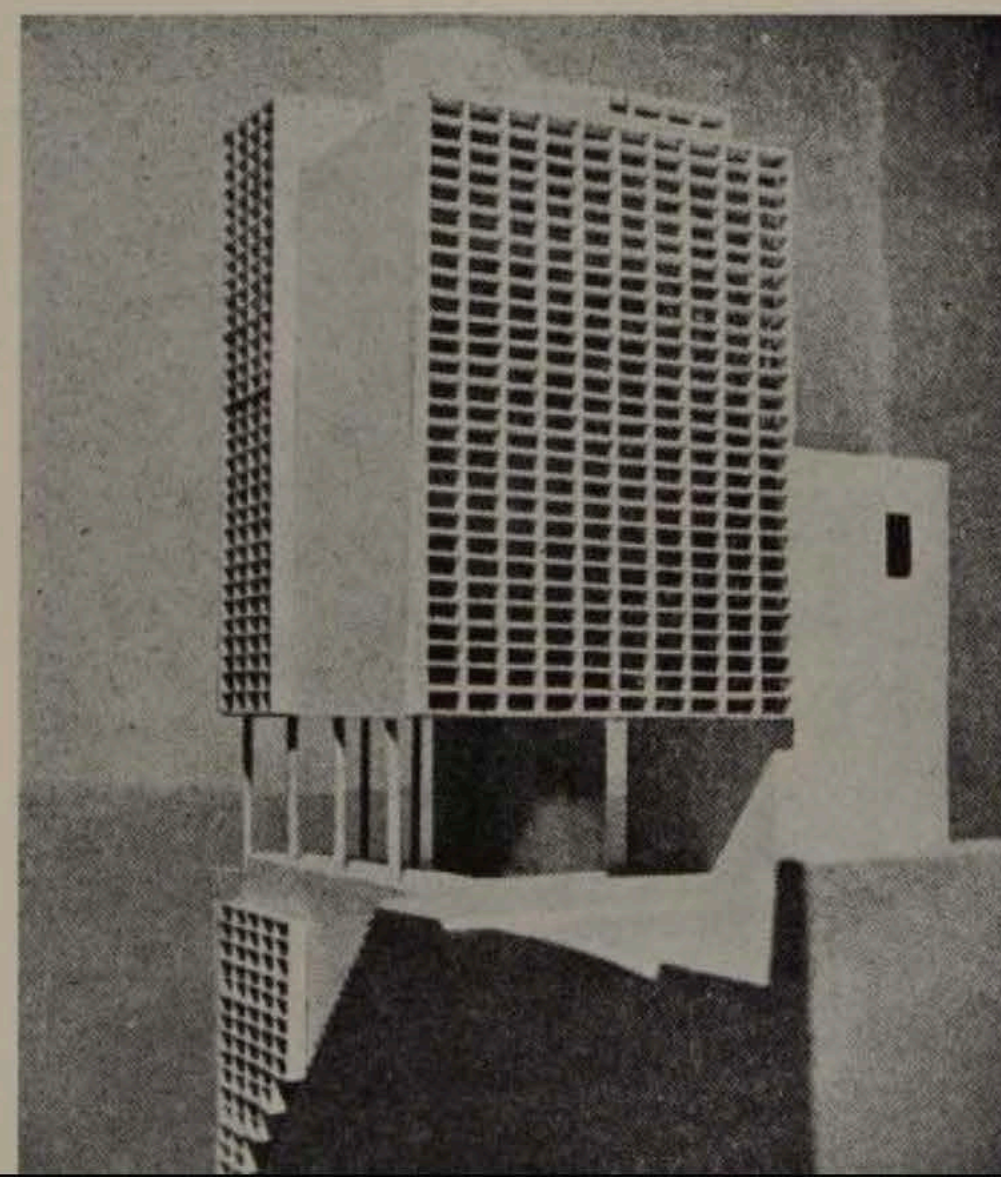


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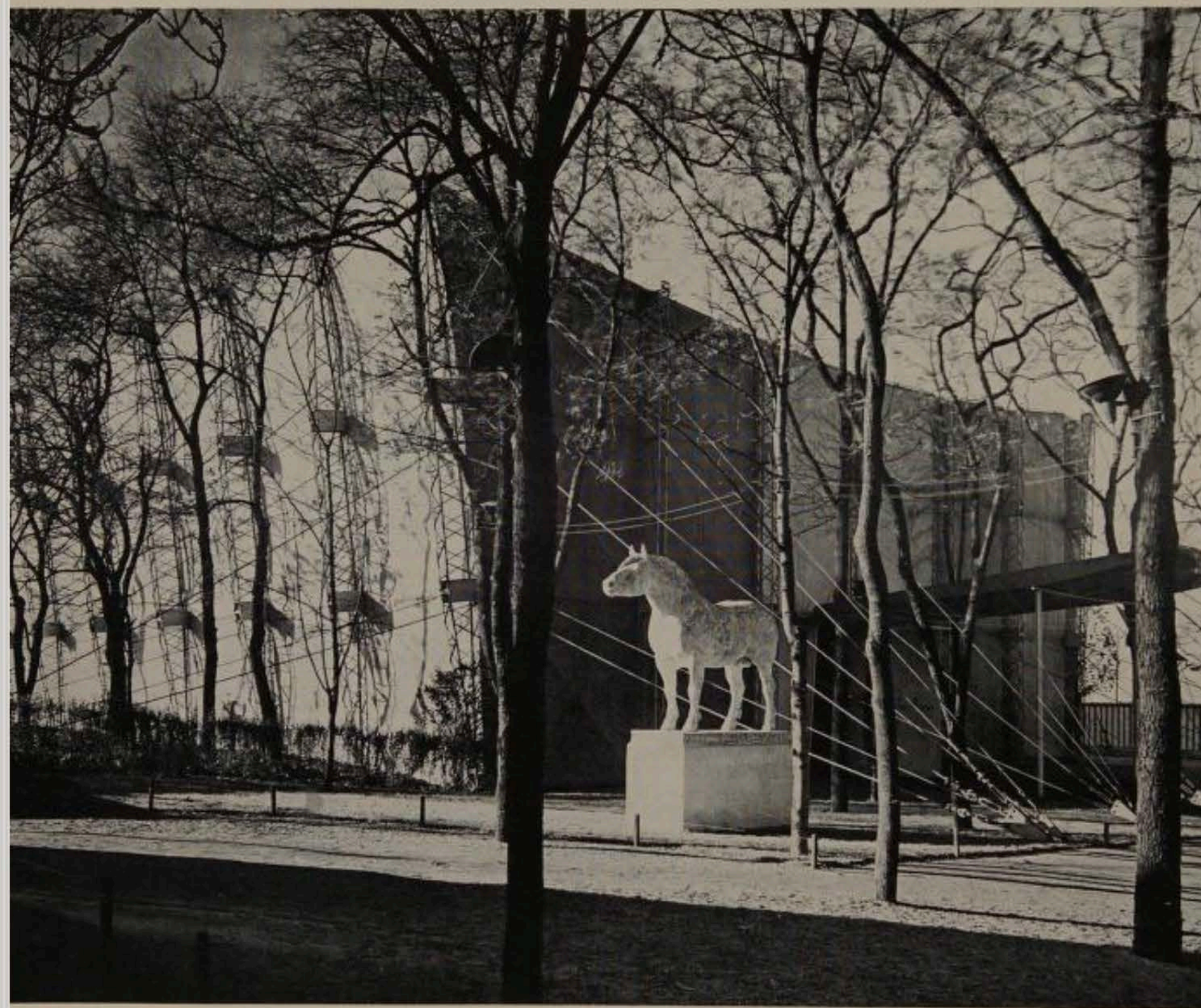
1932. Model for an apartment house in Algiers. The sun screen, like a structural venetian blind, appears for the first time to protect the southern and western facades of the building. The scenic road that follows the sea-coast cuts through at the middle height of the building. The stilts at the road level offer minimum obstruction to the view.



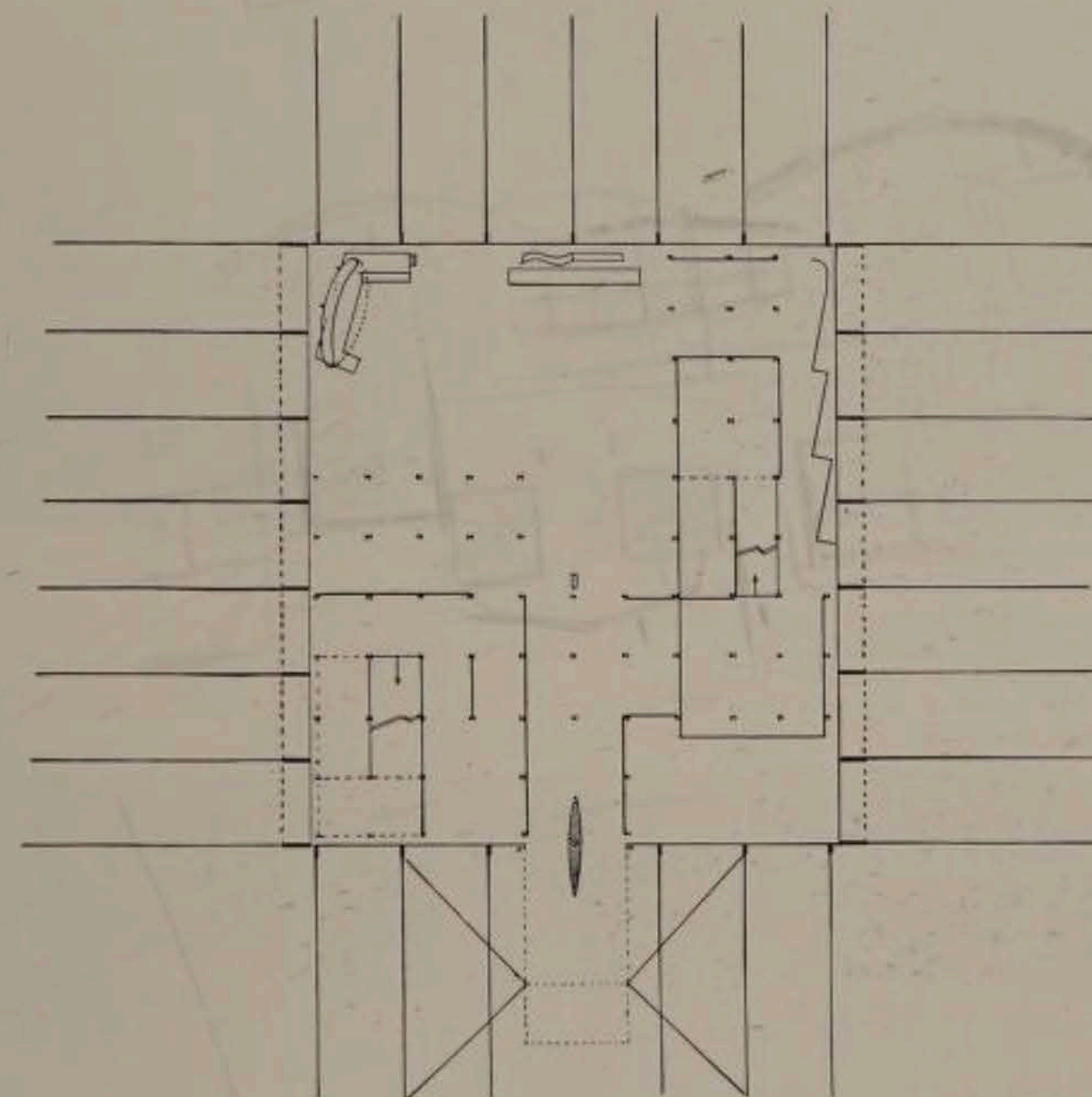
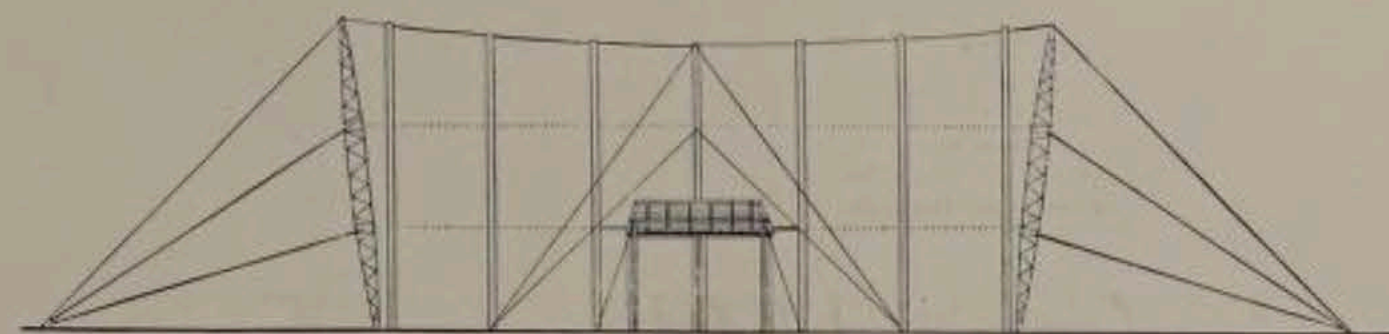
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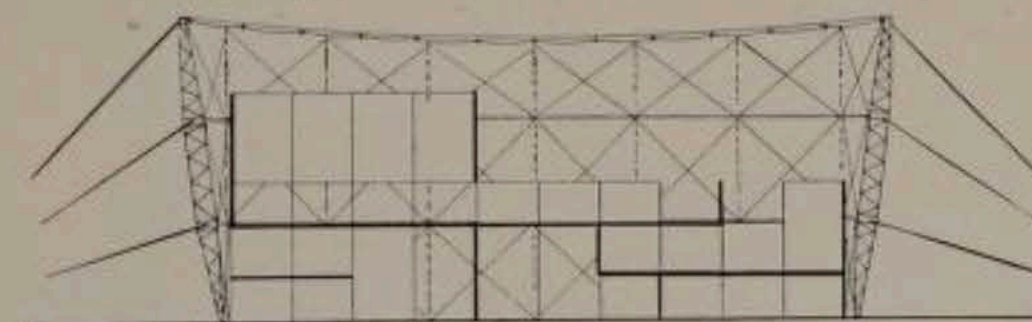
1936. Pavilion of Modern Times for the Exposition of Art and Industry in Paris, 1937. This tent of colored sailcloth offered a floor area of 11,000 square feet to be used for a city-planning demonstration. The roof, treated with tallow, became translucent and waterproof as well. A warm, amber-colored daylight filtered through the roof and the attending guards used to say: "There is always sunshine under the tent."

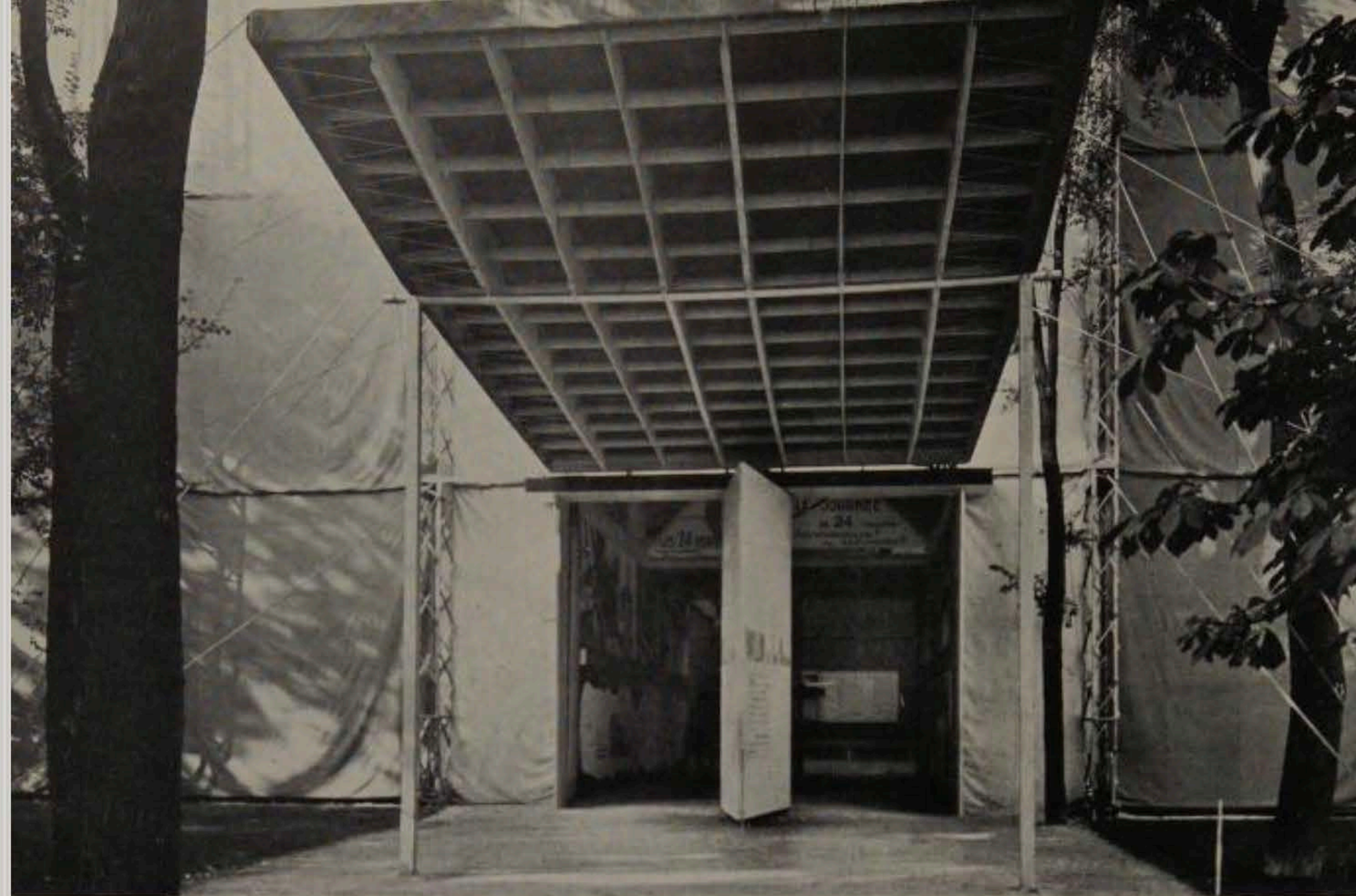


A. Salaun



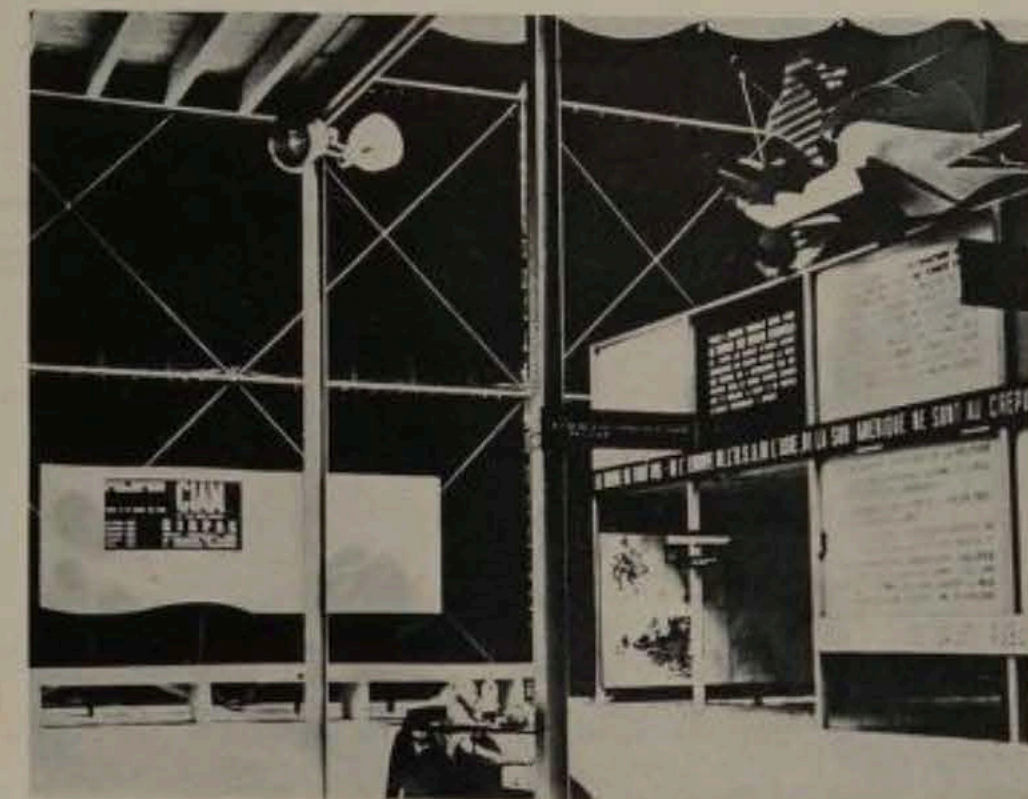
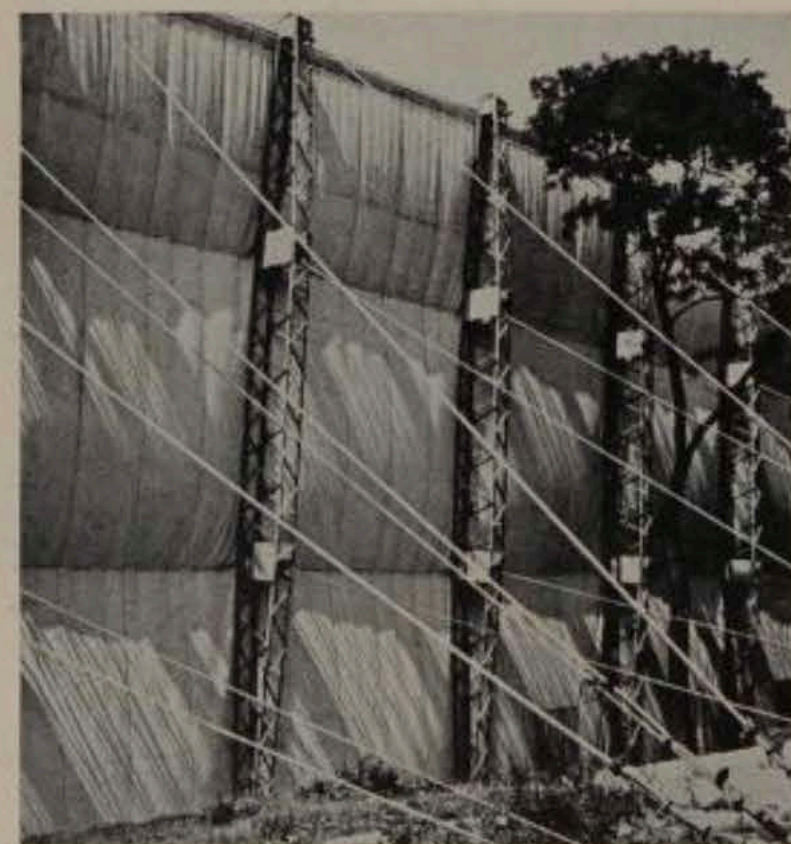
The main elevation (top), ground-floor plan, and cross section (bottom) of the tent.





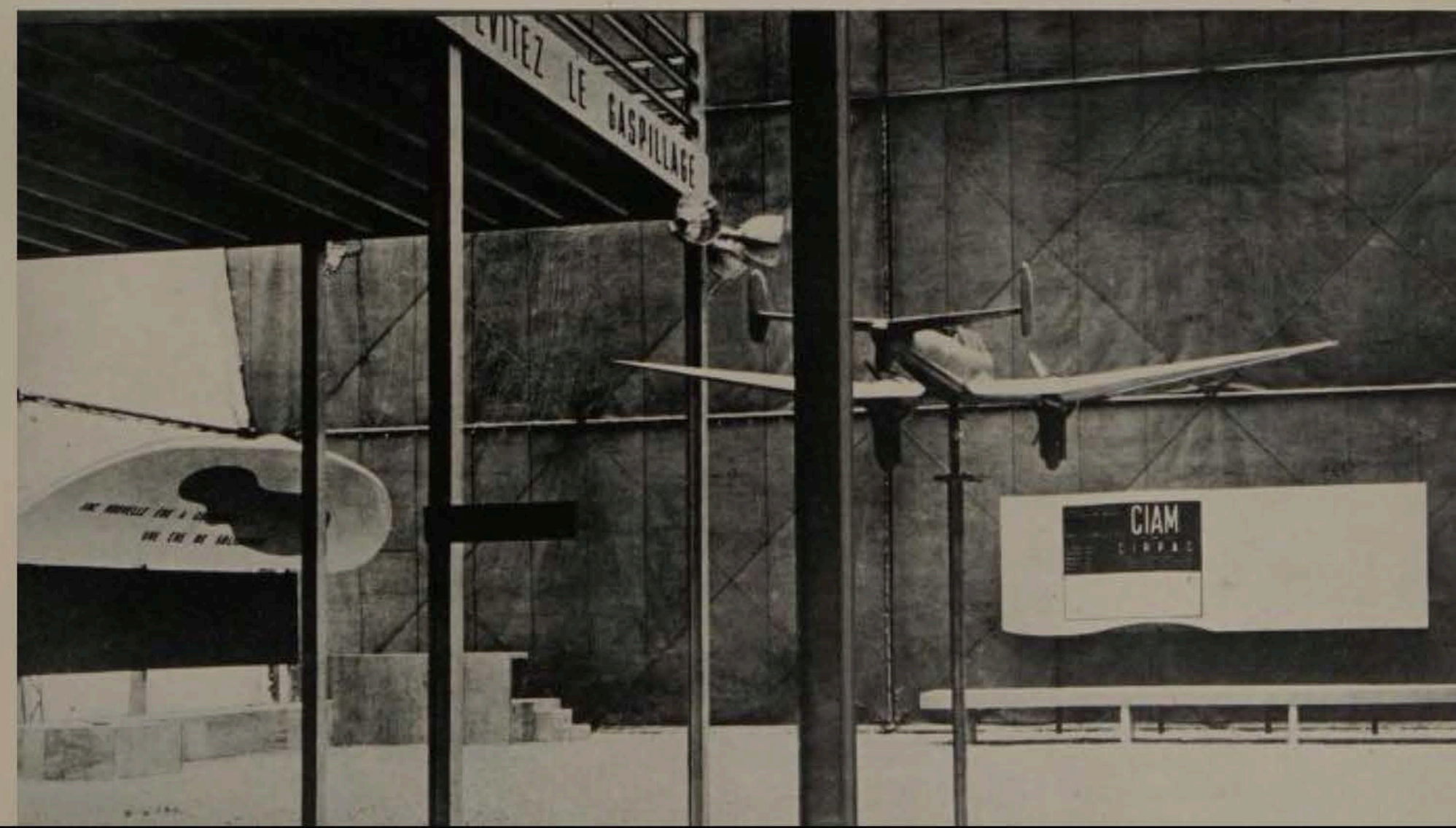
A. Salaun

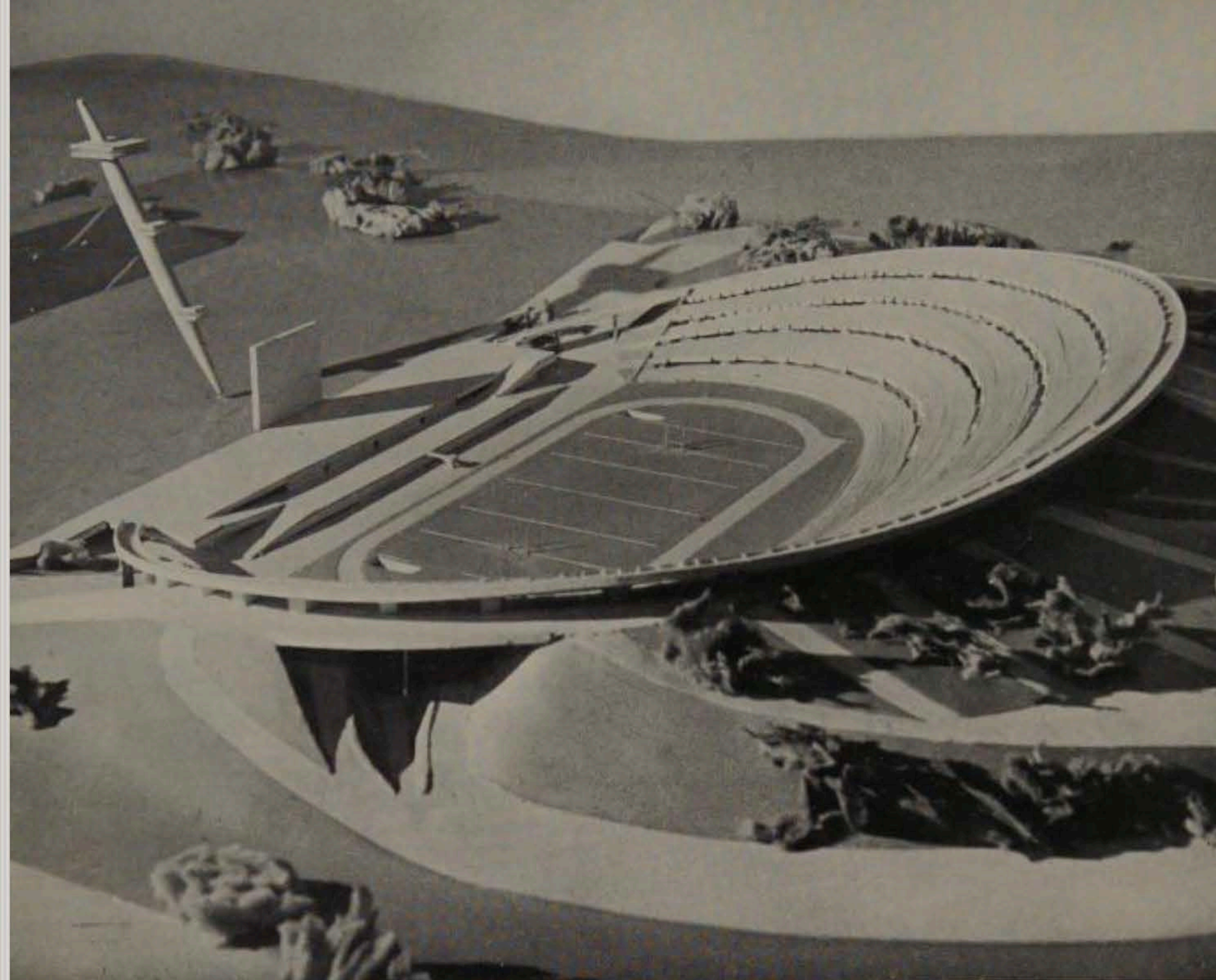
The pivoting door, which divides the opening into entrance and exit, has an area of 300 square feet. The marquee, made of laminated wood by airplane carpenters, has an area of 700 square feet. Below: detail of the exterior of the tent.



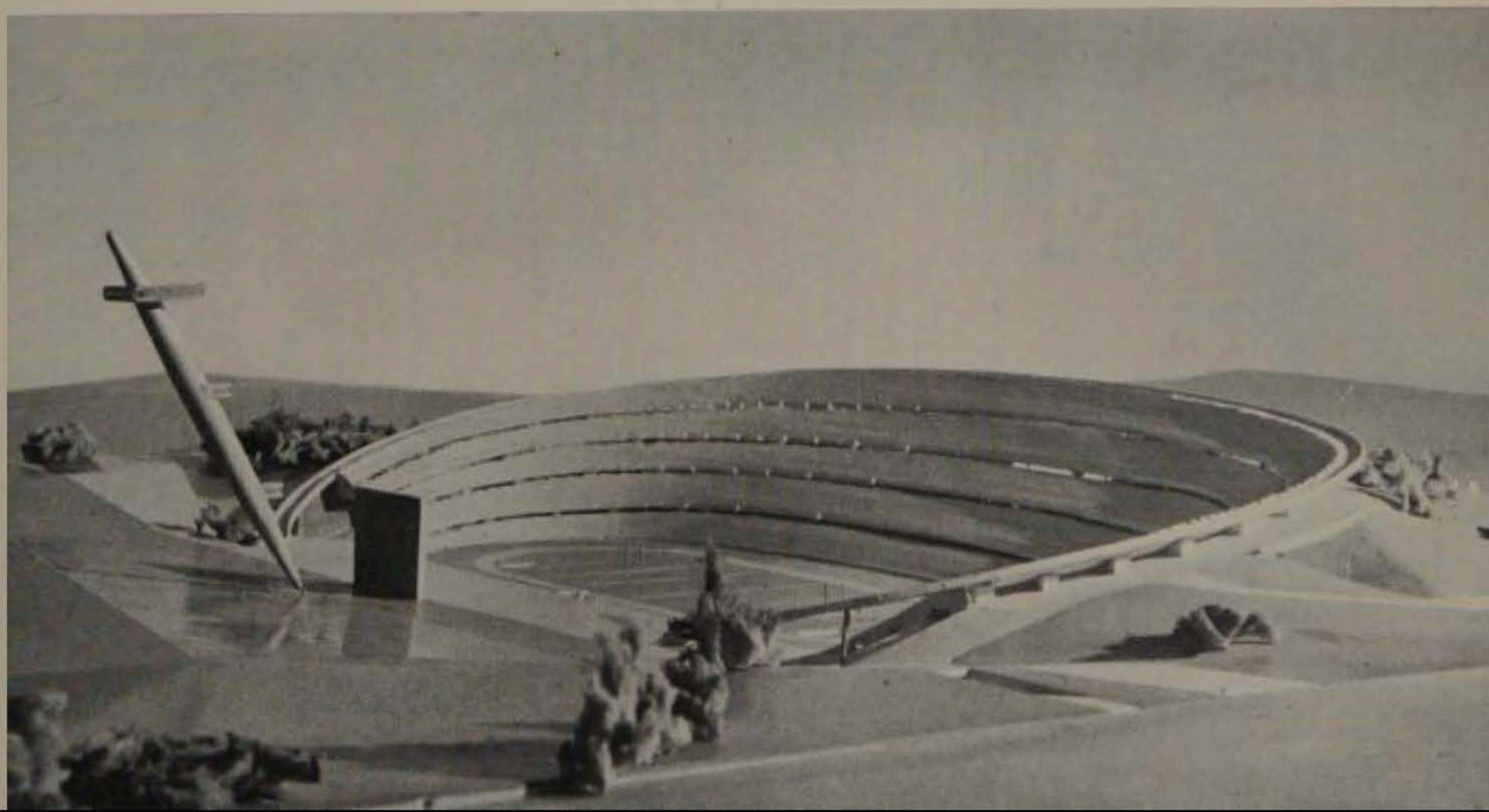
Inside the tent a light steel scaffolding, with posts spaced every 10 feet and 11 feet 8 inches, supports the panels of the exhibition. At the upper right there is a sculpture of plywood and corrugated cardboard by Henri Laurens. At the left, below, the speaker's platform with acoustic shell and blackboard.

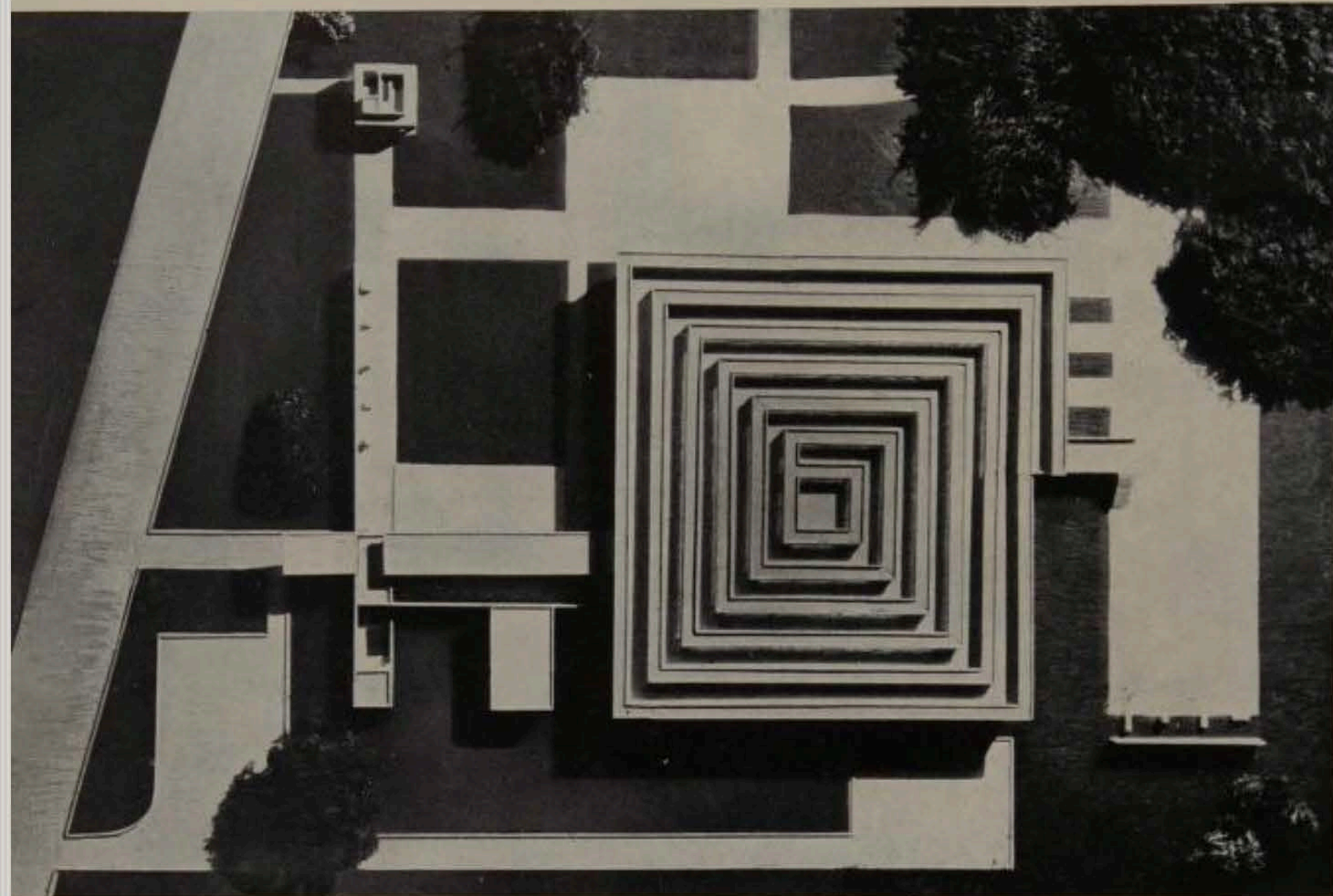
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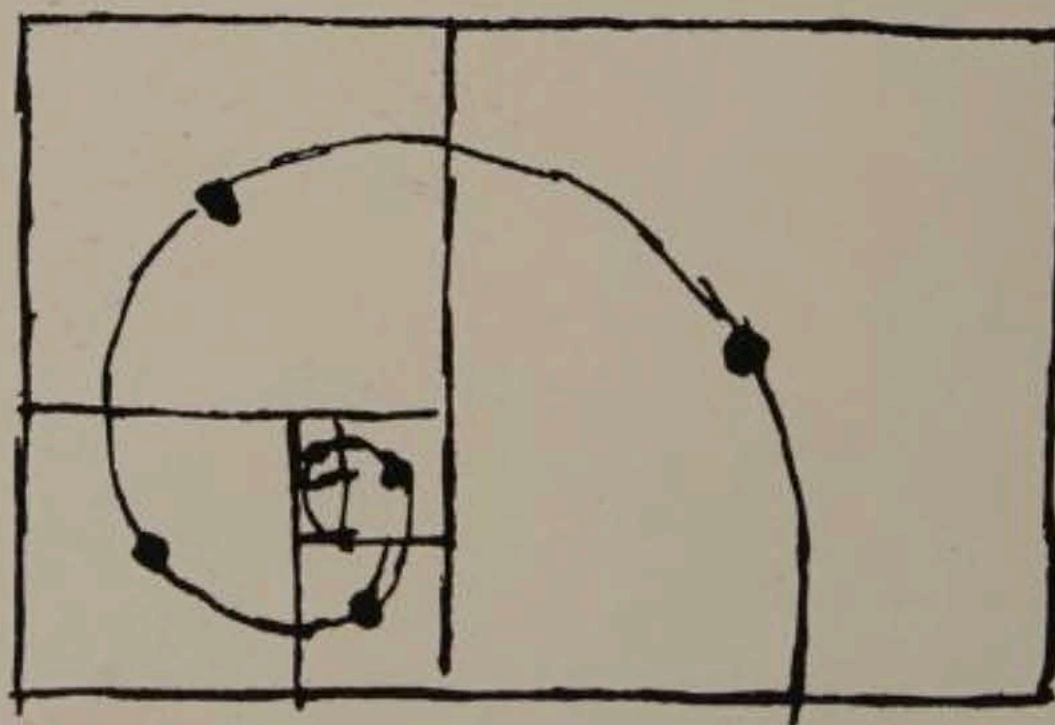
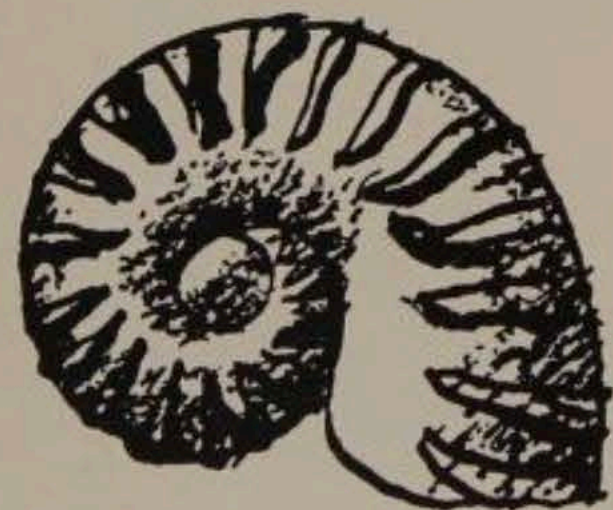


1937. A People's Recreation Center, for 100,000 participants, to be used for Olympic Games, music and theatre festivals, moving pictures, pageants and political meetings. The mast at the left supports a canvas roof. Circulation is effected by means of ramps. In collaboration with Christen (France), Kuiper (Holland), Novitzka (Poland), Dakins (England), Pantowitch (Yugoslavia).

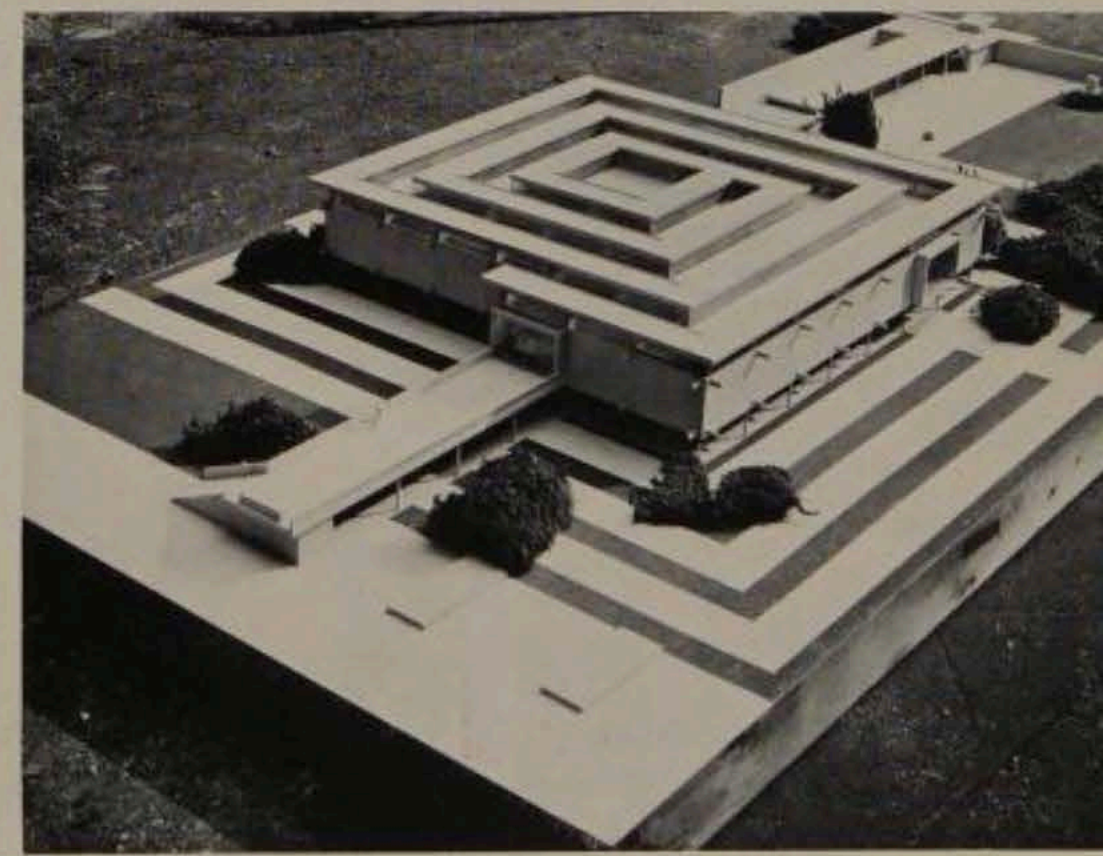
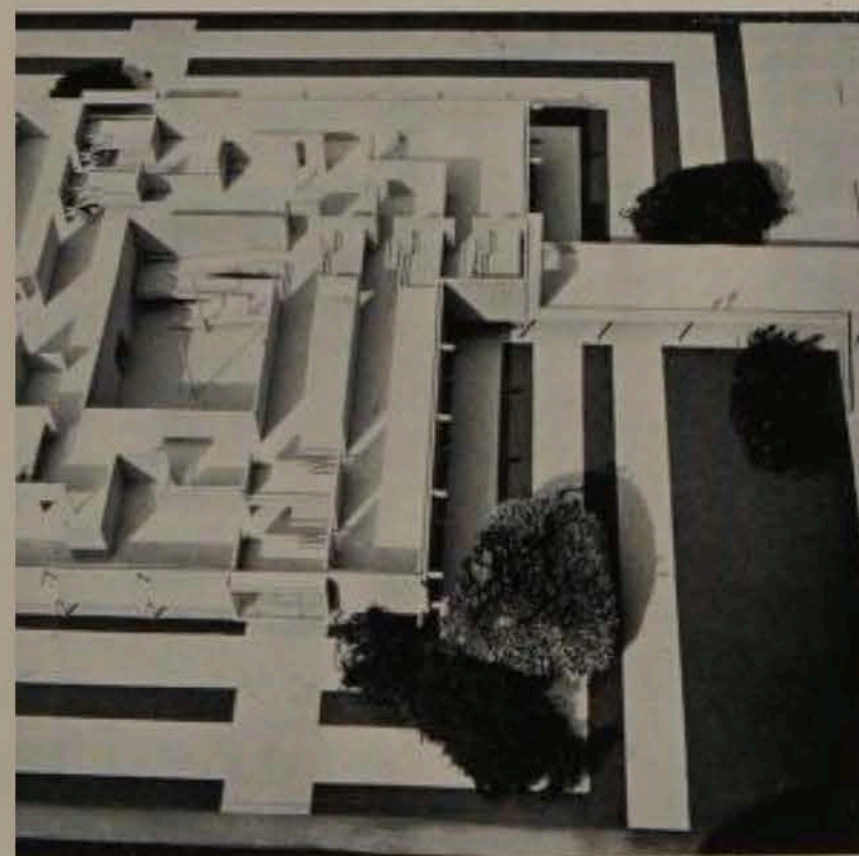


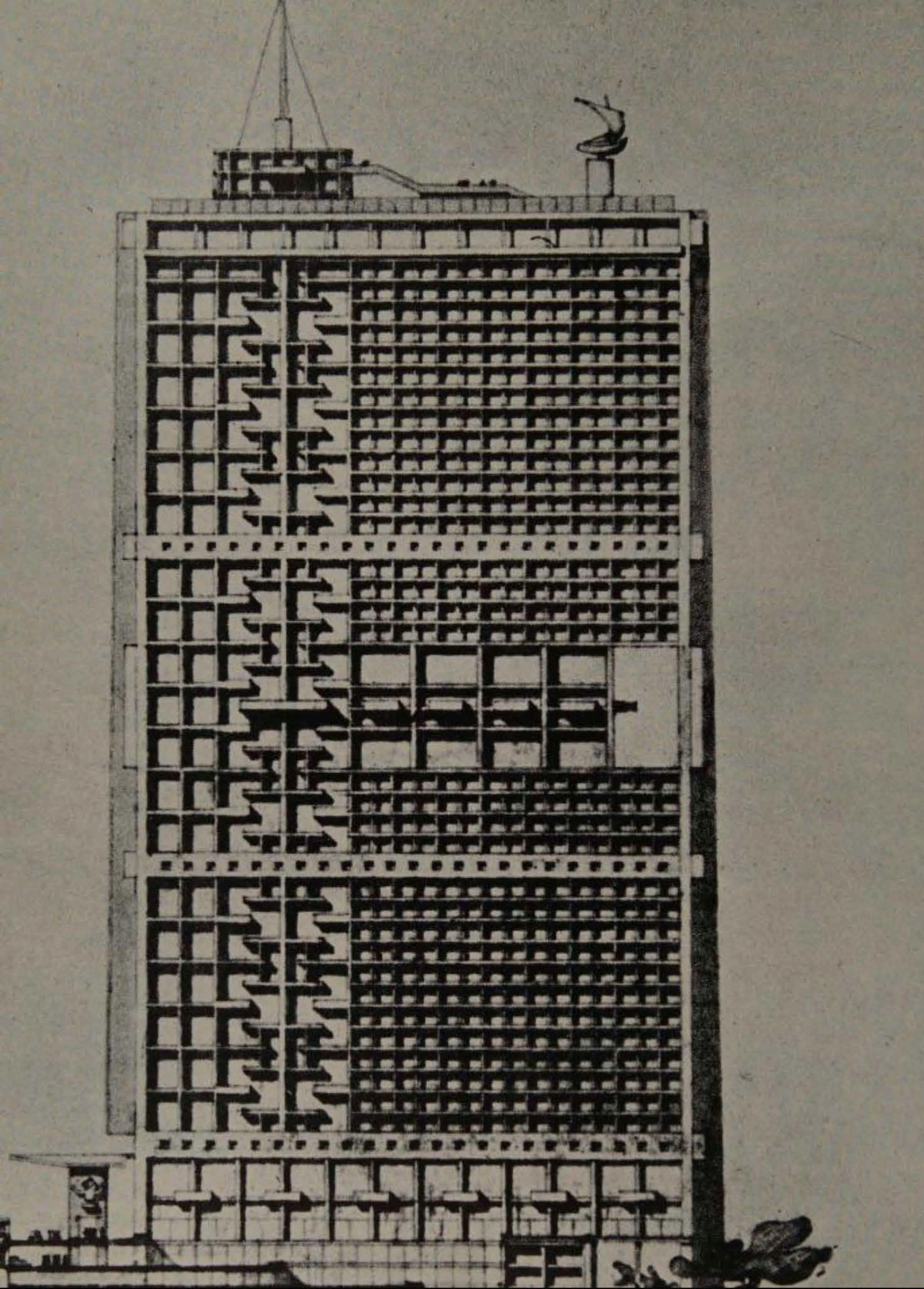


1938. The "Growing" Museum

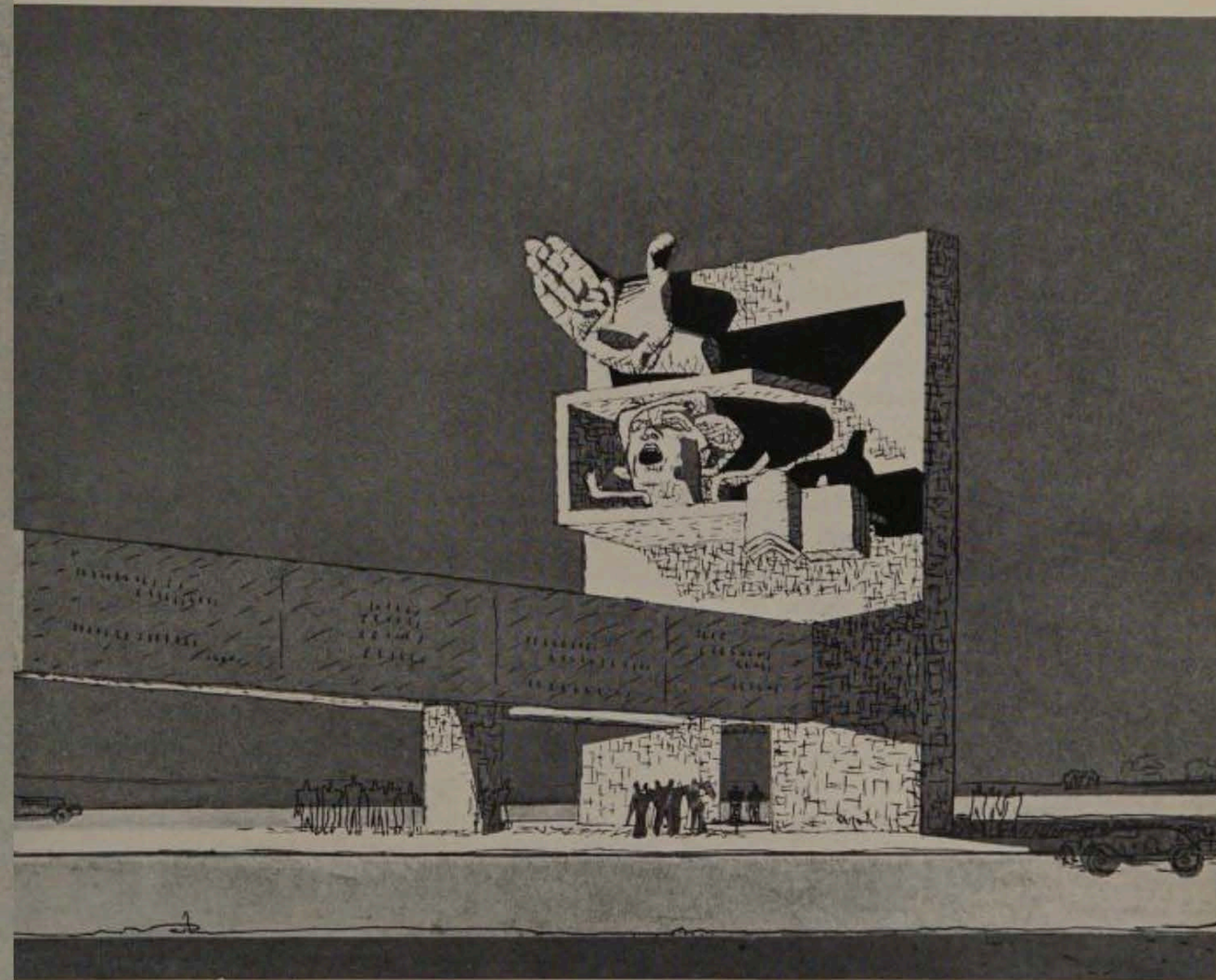


This project offers a minimum exhibition space of 1,100 square feet around which a square spiral twenty-five feet wide is developed. Small communities could have a museum that would grow with their needs without interruption of museum activities.





1938. Project for an office building in Algiers



1939. Proposed monument to Vaillant Couturier

Color in Architecture

BY FERNAND LEGER

I met Le Corbusier about 1921 or 1922, I believe in a rather odd way. At the time I lived in Montparnasse, and I used to go occasionally to the terrace of the Rotonde with friends and models of the Quarter. One day one of them said to me: "Just wait, you are going to see an odd specimen. He goes bicycling in a derby hat."

A few minutes later I saw coming along, very stiff, completely in silhouette, an extraordinary mobile object under the derby hat, with spectacles and in a dark suit. It was the outfit of a clergyman and of an Englishman on a week end. He advanced quietly, scrupulously obeying the laws of perspective. The picturesque personage, indifferent to the curiosity he awakened, was none other than the architect Le Corbusier.

Some time after this vision I made his acquaintance. I can say that our tastes met on many common grounds. He also painted. When I saw his painting I was a little disappointed. It was gray and melodious, all in tonalities. At this time I was personally interested in violent and dynamic color. I said to myself: This fellow however is a very likable sort; it is too bad that we are at the opposite poles in painting. His slant was known as "purism." Since that time his manner has changed greatly.

But aside from all that he was a man of great quality. Of Swiss origin, he had the attentive seriousness of contemporary northerners, entirely divorced from nebulous and literary romanticism. He liked precision, exactitude, simple forms, popular and primitive arts. This was a realm of agreement for both of us. We became good pals.

The approach of the Exposition of 1925 intensified our relationship. The first manifestation of modern architecture appeared under the aspect of a radical clean-up. For a long while no one had known what an interior wall was. It had disappeared in a half-light under curtains, under wallpapers, hangings and knickknacks. Suddenly it "appeared"; and it was a revelation, a bath of nudism. Le Corbusier made us a present of the white wall. We needed it. A completely white wall is a beautiful thing. Architecture set out once again from zero. It was the great heroic age. An exhibition of modern architecture was even held—I believe at Stuttgart—where not a single picture was admitted, not even a Mondrian. Cult of the void. Voluptuousness of the absolute. Note that before this period poetry and painting had both freed themselves from the subject—from the object—we were living abstract art. The escape was complete. Architecture in its turn was now playing the same part to liberate itself. To break away from secular restraints was a magnificent and dangerous undertaking. Not since the Italian Renaissance had a similar enthusiasm been seen. There were endless discussions about the new space, the habitable rectangle, the asymmetrical order, the "destruction of the wall," the elastic rectangle. All of this bounced around without troubling

itself one second whether the good public was of this opinion or not.

At the same time, once intoxicated with the white wall we thought we ought to pay a little attention to it after all. It was at this moment that architects began to look at it from the point of view of color, from the painter's viewpoint. Color was going to be an intimate part of the wall which had just been discovered.

At the Exposition of 1925 we proposed to the public the colored wall. We had recognized that color bound up with light has the effect of rendering distance relative. A light-yellow wall recedes. A dark-chestnut wall advances. Between the two a white wall becomes neutral. The rectangle consequently becomes mobile.

The public proposal of 1925 appeared under the architectural aspect of the creation of a "new habitable space." If you add to that an asymmetrical arrangement of furniture, the revolution is complete. All these problems which we had often raked up together are clearly specified or foreseen in the work of Le Corbusier. He is incontestably the contemporary spirit most lucid in his comprehension and application of all these new ideas.

Color is a natural element, a force of nature indispensable to life. Its function is so various that its powers had to be examined and classified. The year 1925 may be regarded as the beginning of this examination. Before that we were surrounded by disorder and by chance. We can see now a hierarchic border of color running from a delicate shade to destructive tone. There is a problem of "quantity" which becomes technique. What is the quantity of color necessary in a room for it to be habitable? The same problem exists for a street, for a city.

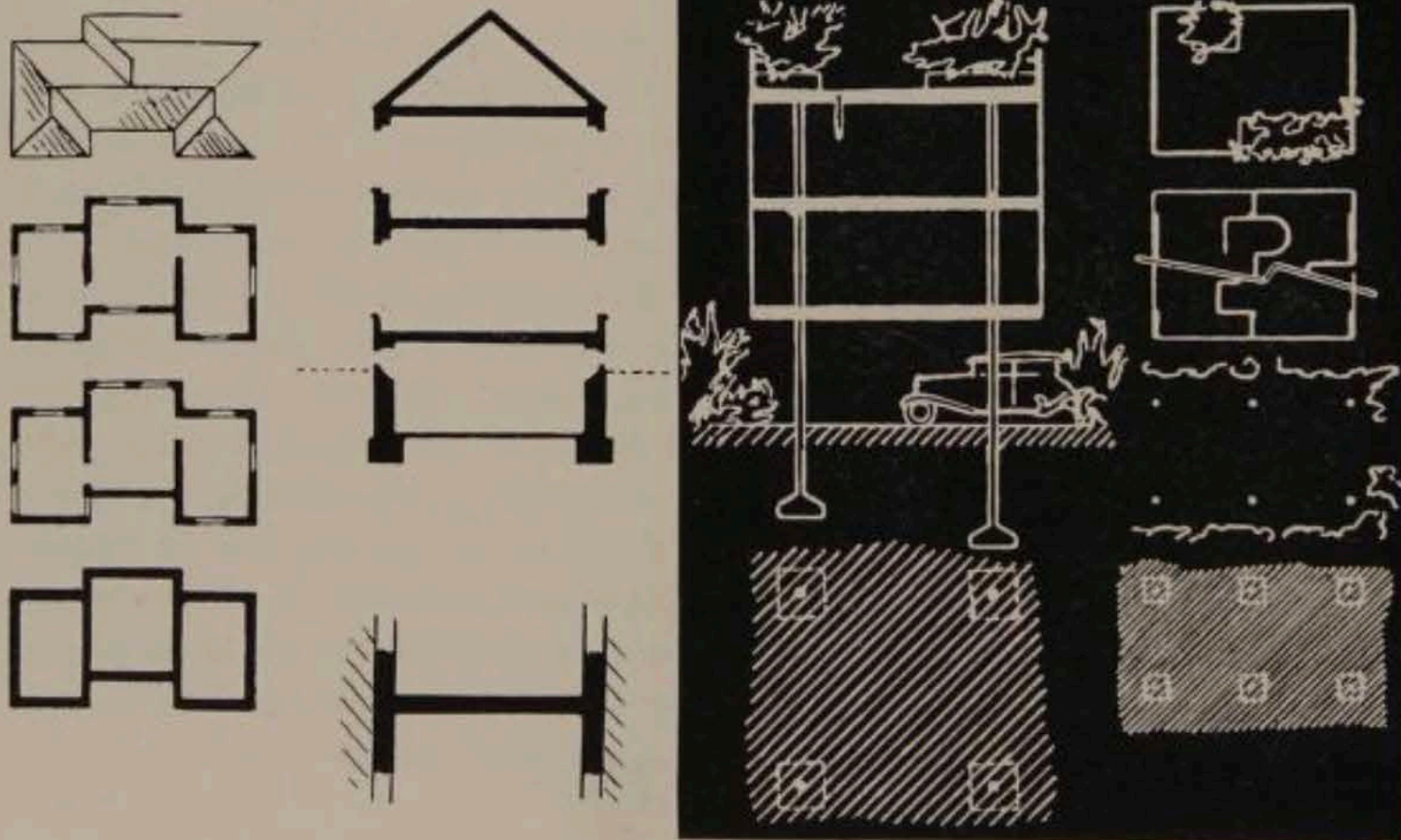
We have all been brought up in an atmosphere of light and shade. As a child I recall that there was always a great to-do when one put aside the curtains. Light and color was the advent of a long-forgotten truth. The consequences were enormous. The faces, the furniture took on a different look, an entirely different scale. The profusion of objects had made us forget the true dimensions of things. The new law was: Few objects but beautiful objects. A standard till then unknown established itself in this new space. The enthusiasm was international and above all Nordic: Holland, Belgium, Germany, and France began to build houses in this new style.

The Exposition of 1925 came in the nick of time to render spectacular and public what until that time were only scattered realizations. Two pavilions in particular were representative of this new architectural expression: the Pavillon de l'Esprit Nouveau, by Le Corbusier, and Mallet Stevens' project for an embassy. I had paintings in both. One battle took place over a mural panel which I had exhibited in the project for an embassy. It was an abstract painting in pure tones, monumental in spirit and without depth. An undersecretary of state had it removed; a minister had it put back. The battle was on. It still continues.

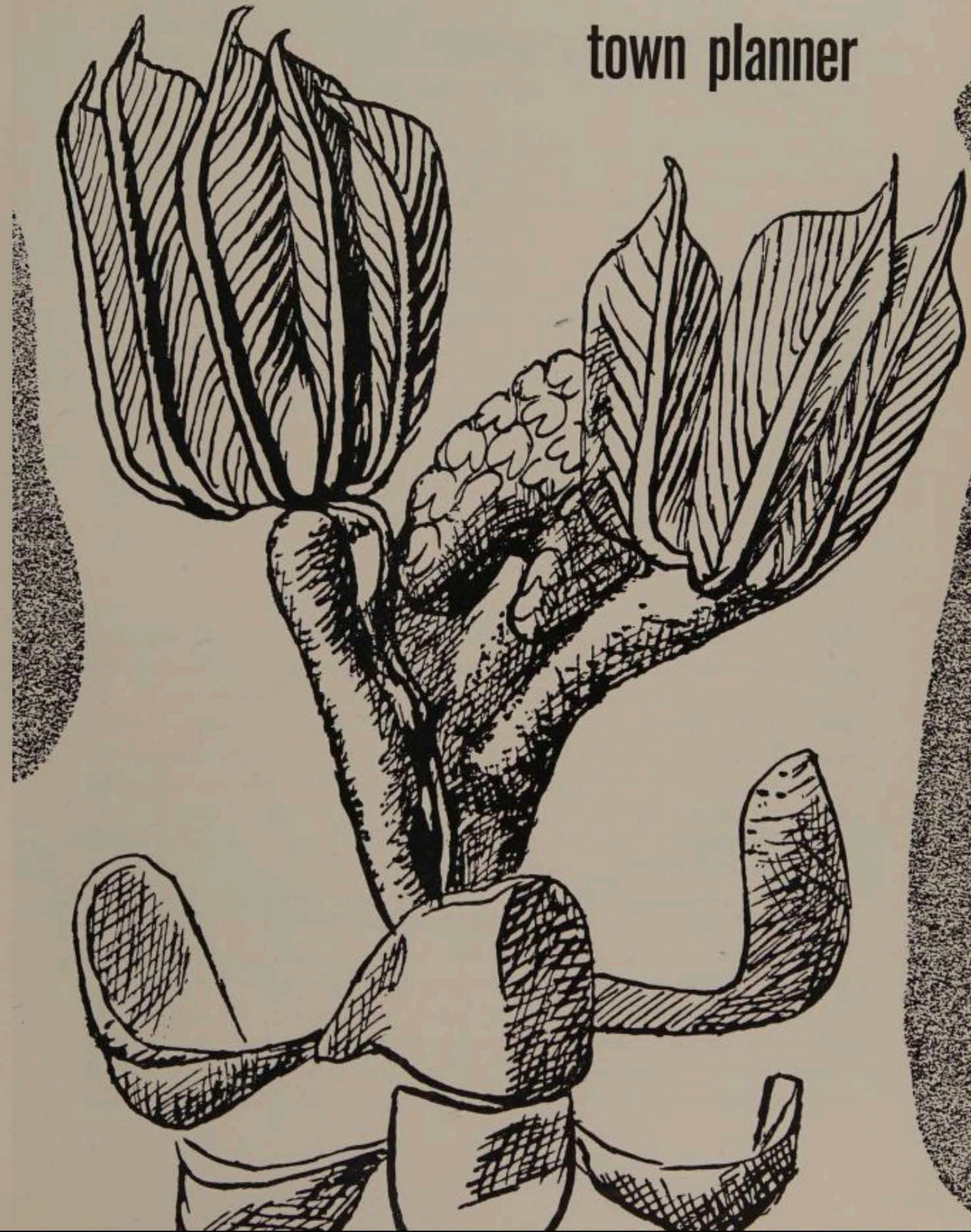
I am not too sure where to place the origin of the movement: the Dutch would like, it seems, to have been its precursors. In any case the work of Le Corbusier by its clarity, its decision, and its realization without dispute dominates the period. What counts above all for the future is the logical spirit which has understood and established the new data. Intentions, sketches, ingenious as they are, are rapidly absorbed by the constructive spirit. Le Corbusier has had that more than anyone else.

A modern factory at Rotterdam is the van Nelle Factory. The old factory was dark and gray; the new is light and transparent. The laborers who worked in the old factory were slovenly and unhappy. In the new factory—without any hint having been made to them, without any instruction—it was seen that at the end of a certain time, they were more tidy, gayer, better taken care of, better dressed. It was simply the light and color—this new truth—which had brought about the change.

This new architecture has an extremely important psychological and social effect. The future will recognize it. The polychrome hospital, color therapy, new popular monuments, the opportunity of the people to approach beautiful works of art in new appropriate architecture, the urbanization of future agglomerations—all are enormous problems which the destruction of this war renders immediate and urgent. If we run through the books of Le Corbusier, we see that he has touched and foreseen the greater number of these problems. Let us put our confidence in him and in his friends. They will be judged by the test.



town planner



From Architecture to City Planning

BY J. L. SERT

City planning encompasses the activities of many specialized fields. This has become increasingly evident in the last hundred years with the revolutionary changes in the cities brought about by mechanized means of transportation and production, by new ideas on health, education, etc. Consequently each field of activity provides a way of approach to city planning. Le Corbusier has approached planning through architecture; others have entered the field through their interest in the administrative, social or economic aspects of urbanism.

Architecture led Le Corbusier to planning as painting had previously led him to architecture in his search for an art expression which is more closely related to life. Le Corbusier's painting has shown an increasing tendency toward mural work, transcending the rectangle of the picture, while his formerly restricted architectural forms have expanded toward greater freedom and fullness, transcending all building lot limits. Such tendencies could only find an appropriate expression in city planning.

The role of the architect-planner has lost the significance it once had since the real estate speculator, during the nineteenth century, took the lead; and his short-sighted views have shaped our cities as we know them today. Le Corbusier realized that no good planning is possible under this condition, for individual needs and those

of the community must be reconciled. He fought for the rehabilitation of the role of the architect-planner as the coordinator of a team of specialists. It is the architect-planner who has to direct and digest the research, to coordinate the programs which satisfy human needs (education, health, etc.).

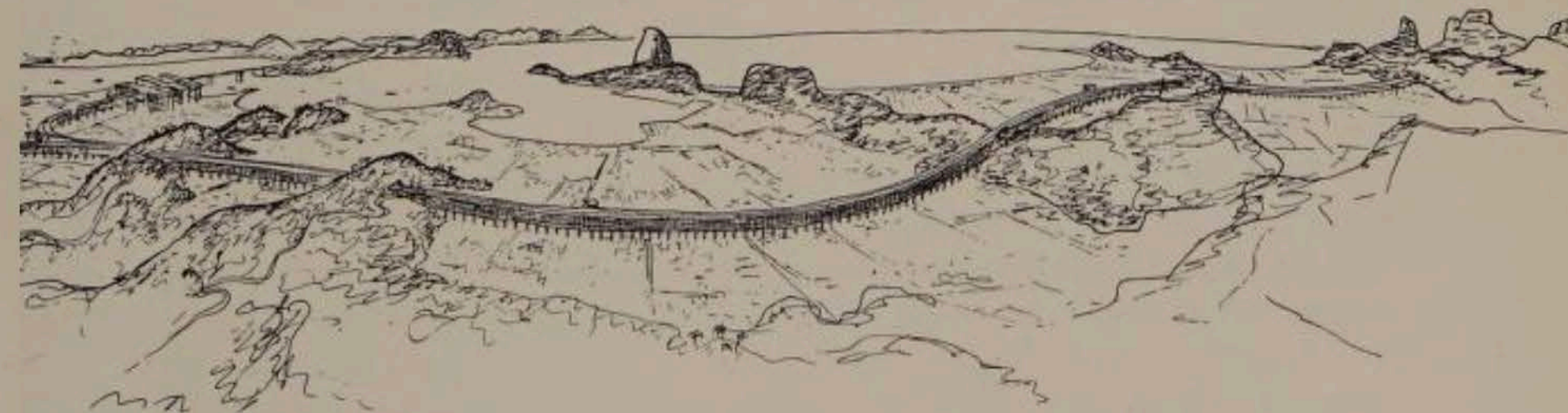
The architect-planner should work with a team of specialists. But such teams did not exist in the twenties and are very few today. What Le Corbusier has achieved in the field of city planning he has done practically alone. His work is still more surprising if these limitations are considered.

Le Corbusier has closely followed the major developments in the field of engineering and the results, as well as the future possibilities, of the techniques of mass production which are applied to the building industry. He has brought together the scattered contributions of road or structural engineers, landscapers and builders, and has integrated their work with his own creative forms, giving us a clear plastic expression of what the modern city could look like.

Such pioneering work is rare. Tony Garnier's plans and renderings for an industrial city preceded Le Corbusier's plans for Paris by about twenty years. It is interesting to note that both plans were produced in France and, in spite of their many differences, have a French sense of order and a bold approach to a new architectural expression of the city.

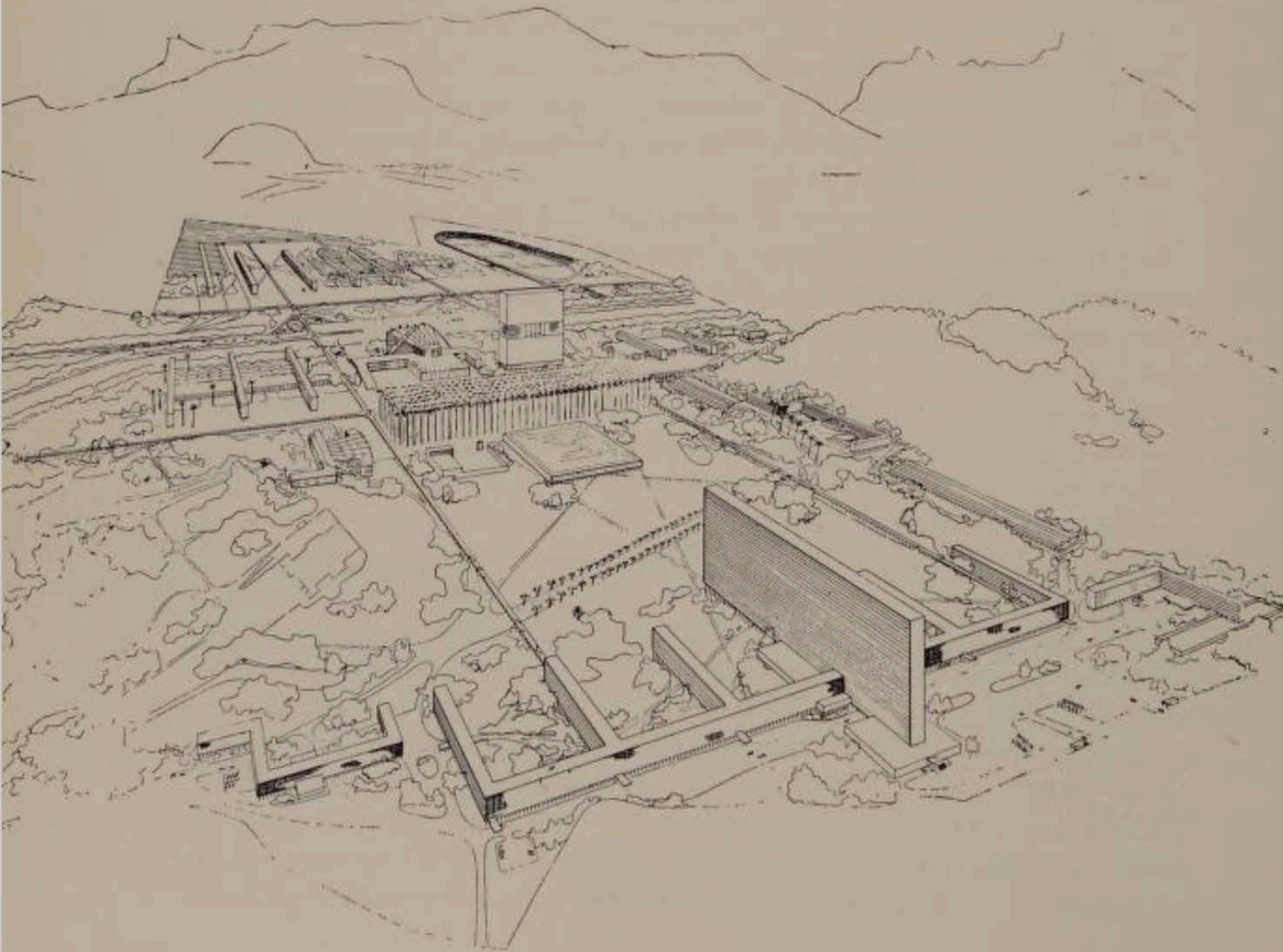
It is this plastic expression, so definite in Le Corbusier's plans, which often opens the way to criticisms. Any schematic or diagrammatic plan as it is usually devised by economists or sociologists, and in which the final form of the city is not disclosed, can always meet with greater public acceptance; and, like all general statements, it can

1929-1930. Project for the city of Rio de Janeiro.



best be interpreted to meet individual requirements. Architectural forms are as a rule absent in such diagrams to the extent that everyone is able to imagine the new city built according to his taste. On the other hand, given the concrete presentations of Le Corbusier's plans, many of his critics took them as final proposals and, as such, they emphasized their defects. Le Corbusier himself is aware of the need for developing further some of his plans; and, in projects like those for Algiers or Paris, one can see the progress made in later versions.

Today we must recognize that Le Corbusier's plans should not be compared with the diagrams developed by the sociologist or the economist in the field. In them he may have neglected certain aspects; but he emphasized and determined other aspects which economists and sociologists have neglected in their turn. An Ebenezer Howard or a Patrick Geddes does in no way exclude or replace a Le Corbusier. He has brought forward the basic elements of the modern city-planning concept.



1936. Project for a University town in Rio de Janeiro. In collaboration with Lucio Costa, Carlos Leon, Reidy, Oscar Niemeyer.

A new scale in city planning, determined by the use of the automobile and by the application of new building techniques, finds a clear expression in Le Corbusier's plans. New road systems and landscaped open spaces are coordinated with new forms in buildings, derived from new needs and new methods of construction. But, in addition, all these forms have been so integrated in his plans as to satisfy the spiritual need for the new plastic expression that painters and sculptors have been developing during the previous decades, and which is here applied to the city. Le Corbusier in his cities has transformed all urban elements so as to form part of one great pattern of forms, lights and shadows, colors, texture, landscape, and life itself.

Le Corbusier strives to relate to man all the varied technical factors that enter into city planning. For example, by establishing proper channels for the mechanized means of transportation, he leaves the ground free for man to walk again. He has integrated in his plans both the automobile and the man who remains "the measure of all things."

The use of natural elements, such as trees and plants in landscaped areas, is also with Le Corbusier a means to humanize the city and to create a rich pattern by contrasting natural forms with architectural forms which are essentially geometric. On the other hand, Le Corbusier designs cities not to fuse but to coexist with nature. Following the Mediterranean tradition, he does not try to compete with nature in selecting his forms, but the geometric patterns of his buildings fit into their natural surroundings.

Le Corbusier has rediscovered in city planning, as he previously did in architecture, the value of certain forgotten practices, such as giving "civic character" to the nucleus of the city. His plans express clearly the differentiation of this center, its particular forms and scale. (See his recent plan for the reconstruction of the town of Saint-Dié, page 112.)

The cities of today are, as a rule, shapeless masses; differentiation by function is not usually applied, and waste is the only dominant feature. In Le Corbusier's projects, areas are classified not only according to function—residential, industrial, recre-

ational, business, commercial, etc.—but each is given a particular character. Le Corbusier knows that cities, no matter how open and green, should be frankly urban. By definitely contrasting urban surroundings with rural ones he avoids the middle-of-the-way pattern developed in modern suburban zones, which some British planners have called the neither-city-nor-country complex.

Le Corbusier plans for **high densities of population**. He believes that such densities are not in themselves a problem. Congestion and slum conditions in our cities today are due to excessive land coverage, to the persistence of the old street patterns, and to the unrestricted land speculation. Slums exist because of the failure to provide the proper surroundings for high densities of population. The average of two hundred inhabitants to the acre in Manhattan would constitute no problem in residential, business or commercial districts if a master plan and land-use laws imposed a low coverage of land, a classified street system, parking areas, adequate open spaces for public parks, sport fields, and community services. The problem does not lie in the two hundred inhabitants to the acre; it has deeper roots.

Shifting toward extremes is not a characteristic of Le Corbusier's work. He has avoided the rigid functionalism of the German housing developments of the twenties (*Siedlung*) and the romantic approach of the British garden-city designers; he has taken, nevertheless, the good lesson of the landscaping technique developed in that country. It is true that Le Corbusier's work was criticized in the twenties for not being entirely functional; but Le Corbusier knew then that functionalism alone would not solve the inescapable architectural issue involved in city planning, and that the humanization of cities depends on more than mere subjugation to functions. "Human creations that survive are those which produce emotions, and not those which are only useful."*

Le Corbusier's influence in the planning field is expanding rapidly, as the interest in city planning has increased since the war with the problems of world-wide reconstruction. The younger generation of planners, many of them members of the International Congresses for Modern Architecture (CIAM), an organization in which Le Corbusier has a leading role, occupy responsible posts in official planning bodies.

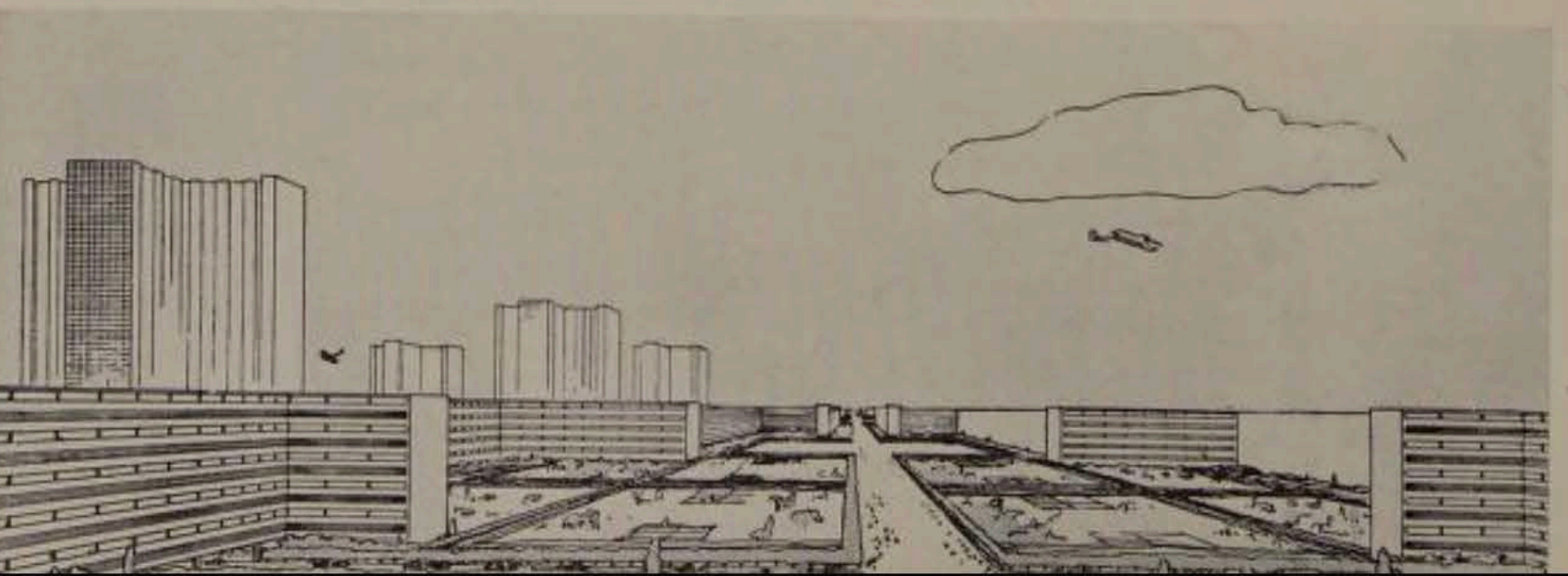
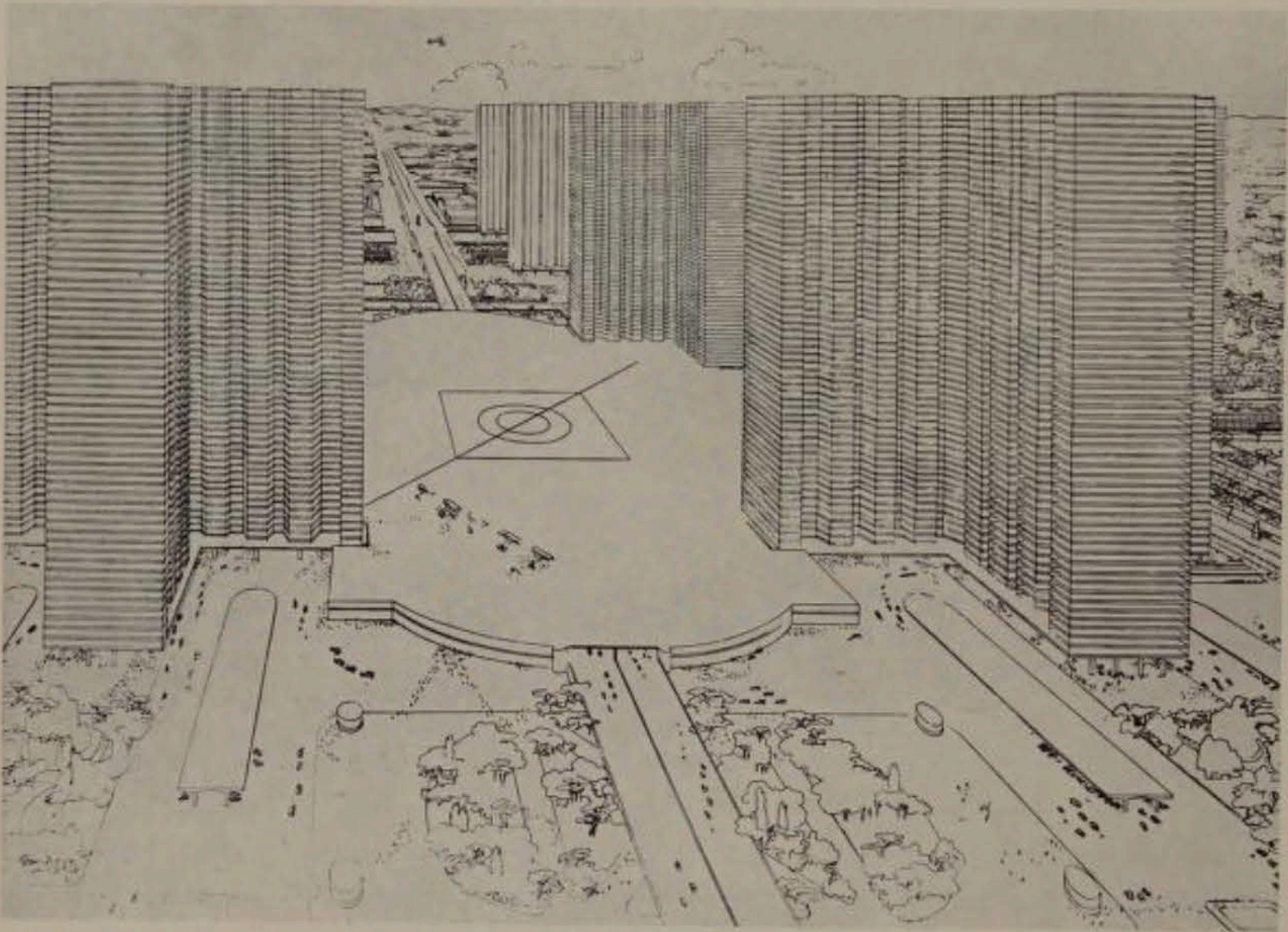
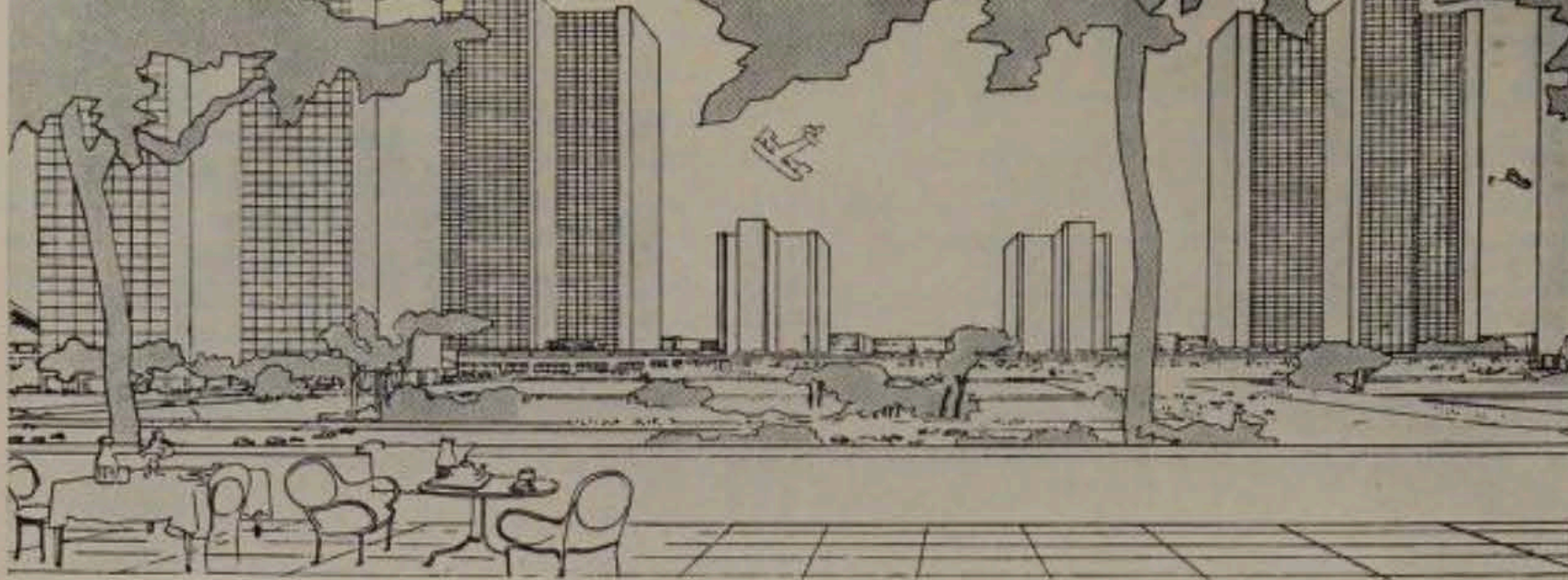
Everyone of us knows today that the chaotic conditions in big cities cannot be corrected by half measures. Le Corbusier's plans, rejected as "impractical" in the twenties, are now beginning to be regarded in a new light, and the application of some of his so-called Utopian ideas are already suggested by official planners. Le Corbusier's contributions to modern city planning can no longer be disputed; they remain the greatest challenge in the field.

* Le Corbusier, *Le Lyrisme des Temps Nouveaux et l'Urbanisme*, p. 5.

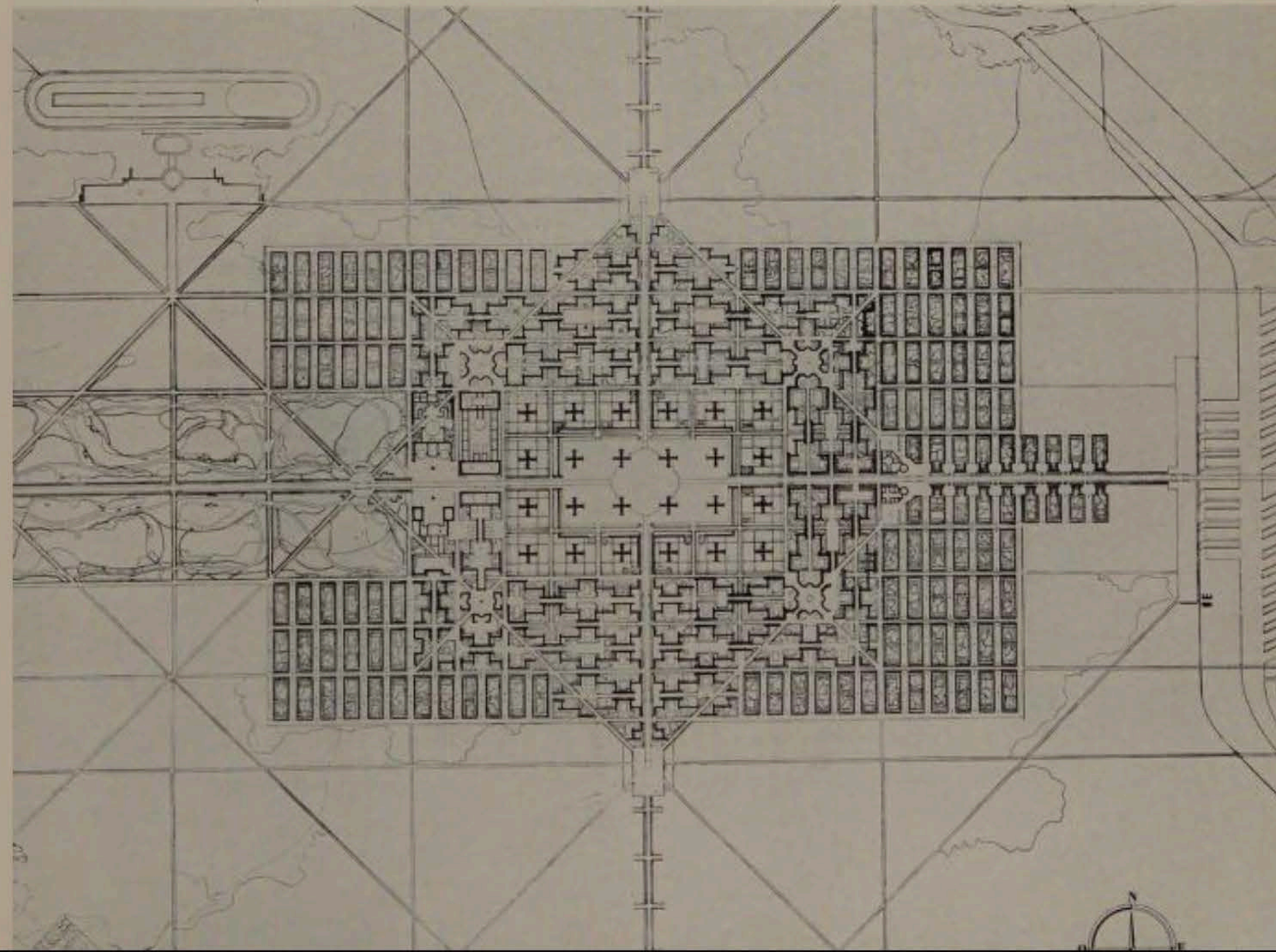


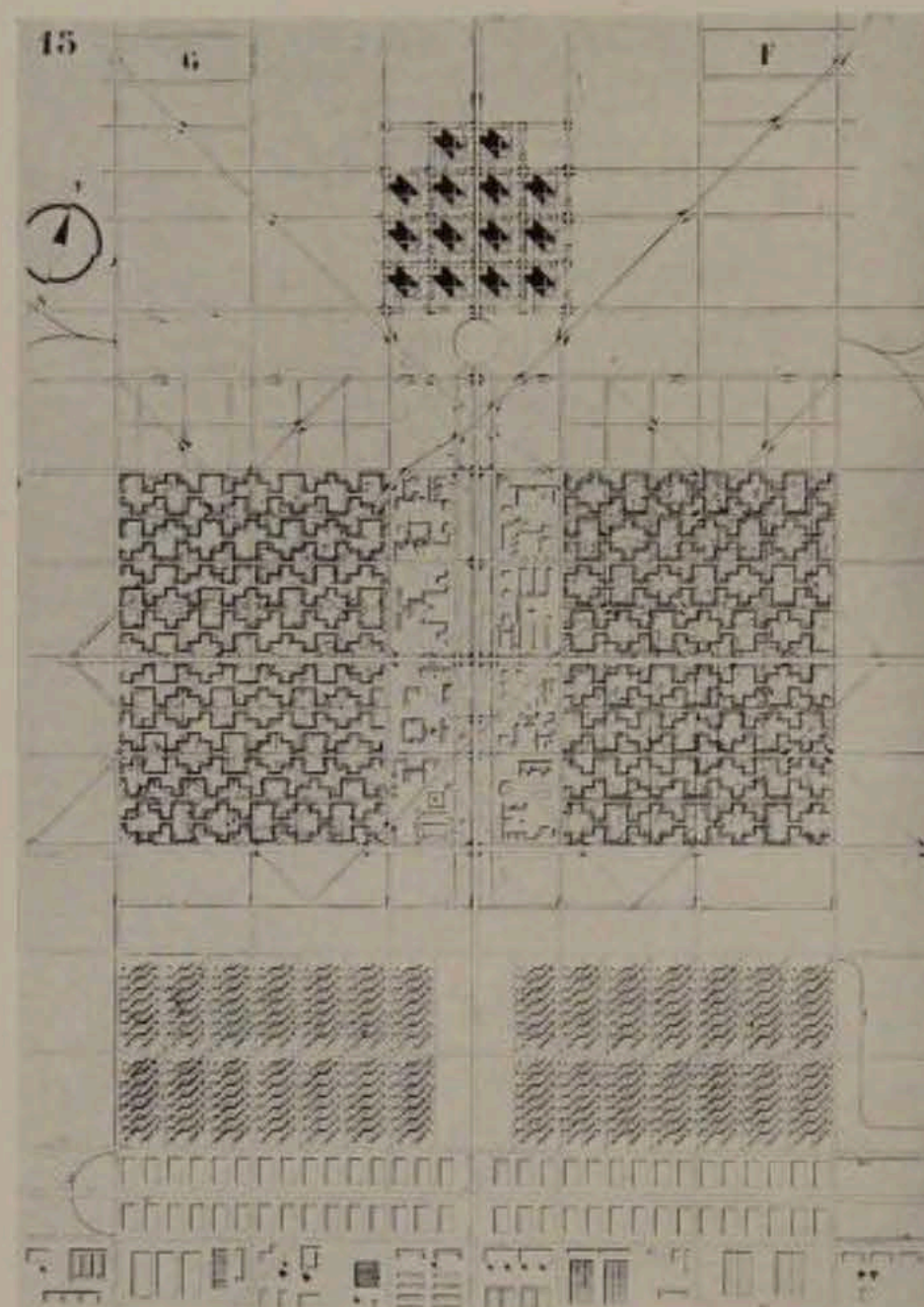
1. toward an urban doctrine

Le Corbusier's abstract research, from a hypothetical metropolis to a cooperative village, has often exasperated all those who, in terms of city planning, consider nothing except local "improvements" that are part of an unknown and uncontrollable whole. Nevertheless, these series of abstractions, the result of twenty years of incessant work, have helped Le Corbusier to clarify the complex urban phenomenon, to separate it from conceptions and terminologies derived from outmoded real estate procedures, and to develop the positive elements of an urban doctrine which we find applicable to a variety of cases: Algiers, Paris, Rio de Janeiro, La Palisse.



1922. Order comes to chaos: a city of 3,000,000 people, presented for the first time at the Salon d'Automne of that year. This first urban project by Le Corbusier is primarily a revolt against the irrational growth of contemporary cities. It is a plan for a concentric city in which orderly, controlled elements replace the traditional patterns of the old metropolis. The ground is an uninterrupted park given to pedestrian traffic; 95 per cent of the terrain of the business zone and 85 per cent of the residential area is landscaped. The applied densities are: 1,200 people per acre at the business zone, 120 for the dwelling sections. The business area, located in the geometrical center of the city, surrounding the railroad station and at the left of the civic center, is composed of twenty-four skyscrapers placed at equal distances. The business center is surrounded by a residential zone of lower buildings (ten stories high) which contains schools, shopping centers, and recreational facilities. At the extreme right of the plan there are freight yards, warehouses, and manufacturing buildings. Multi-story arteries are provided for local and through traffic. The size of the superblock is 650 feet by 1,300 feet.



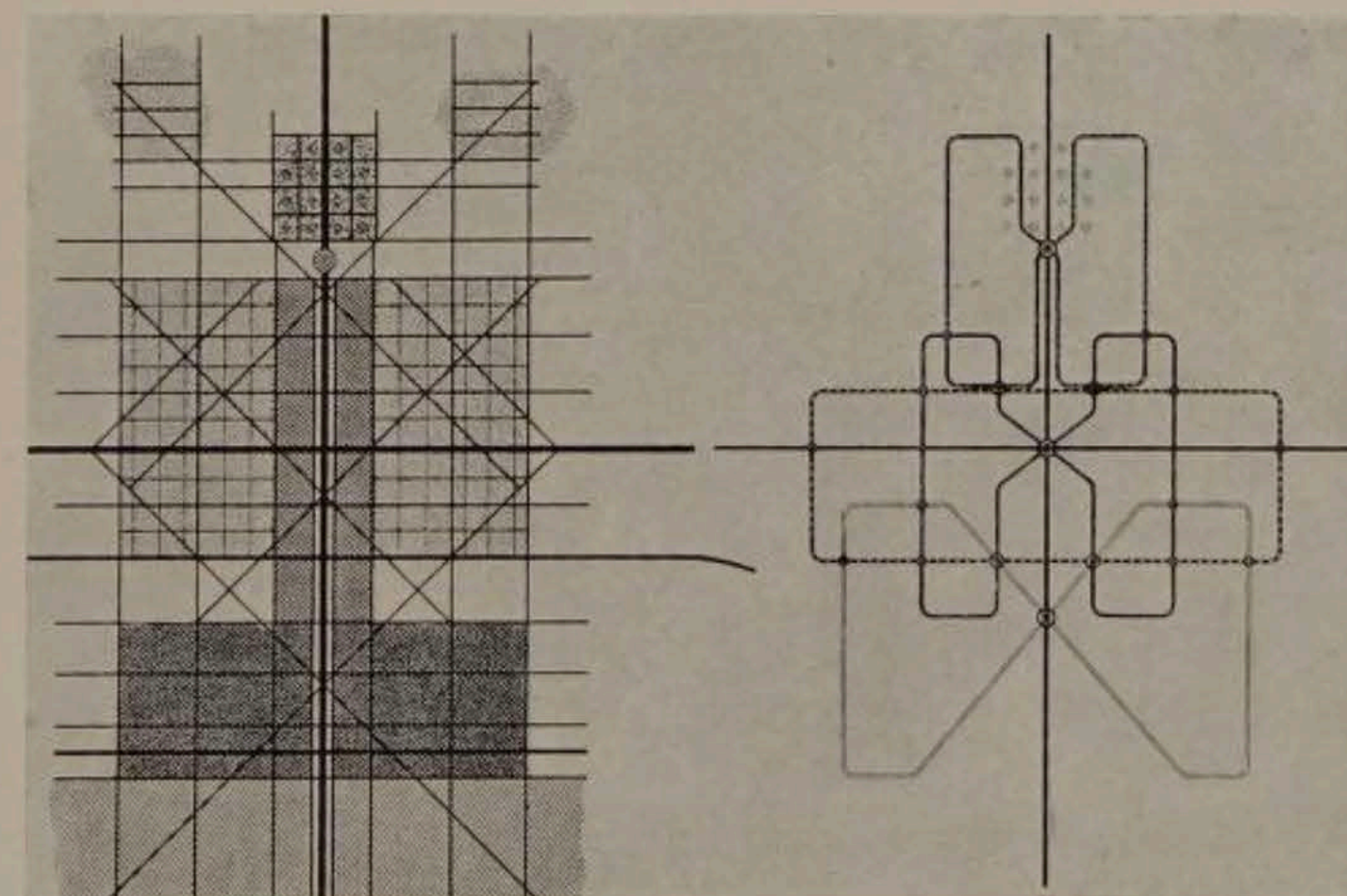
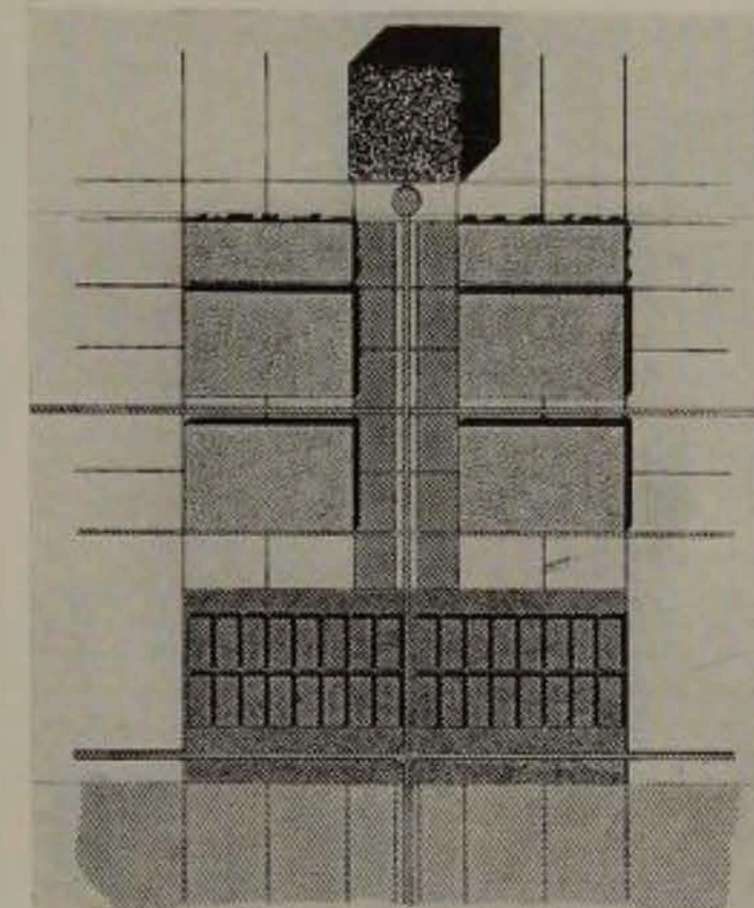


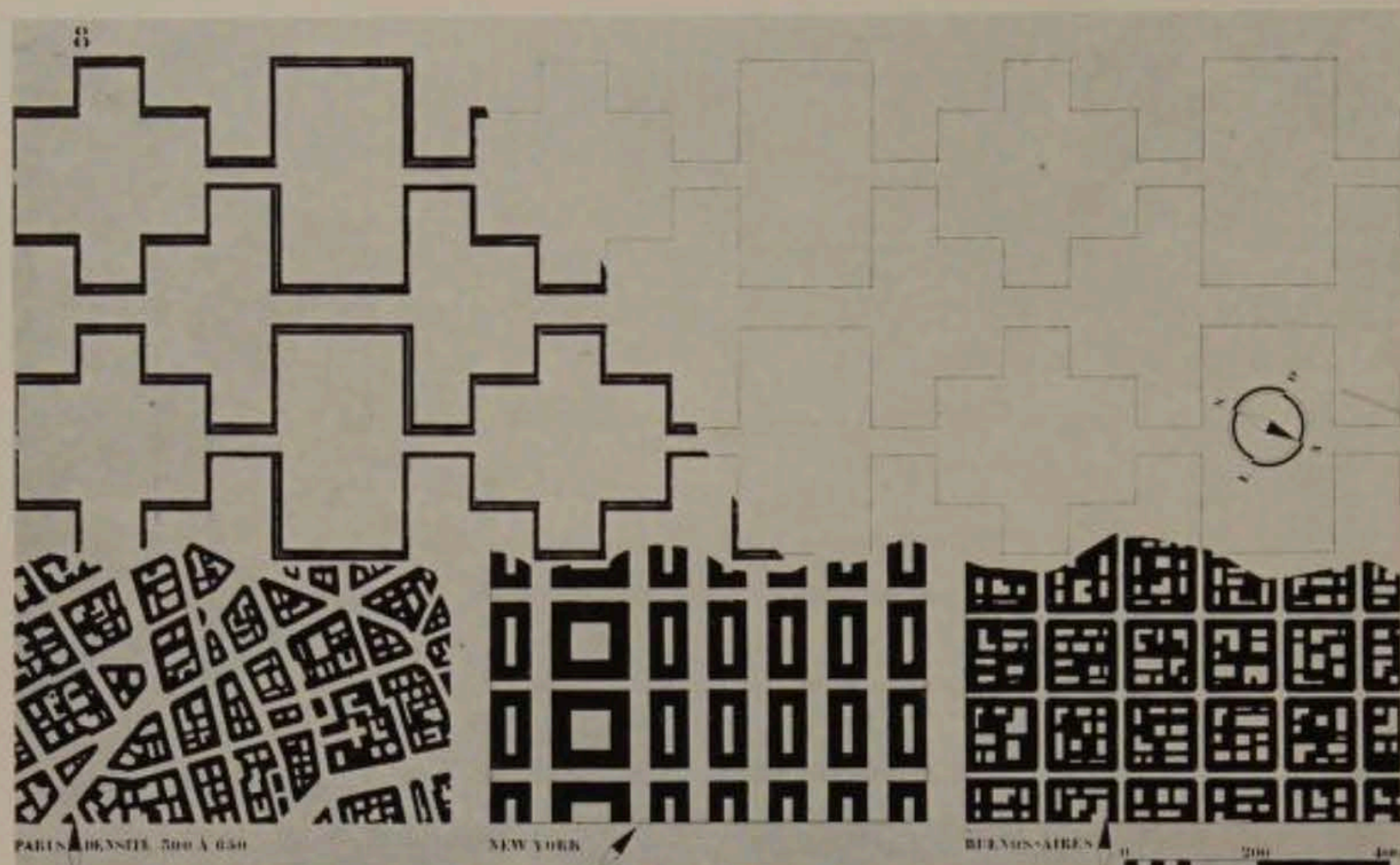
Business center
Railroad station
Hotels

Dwelling area

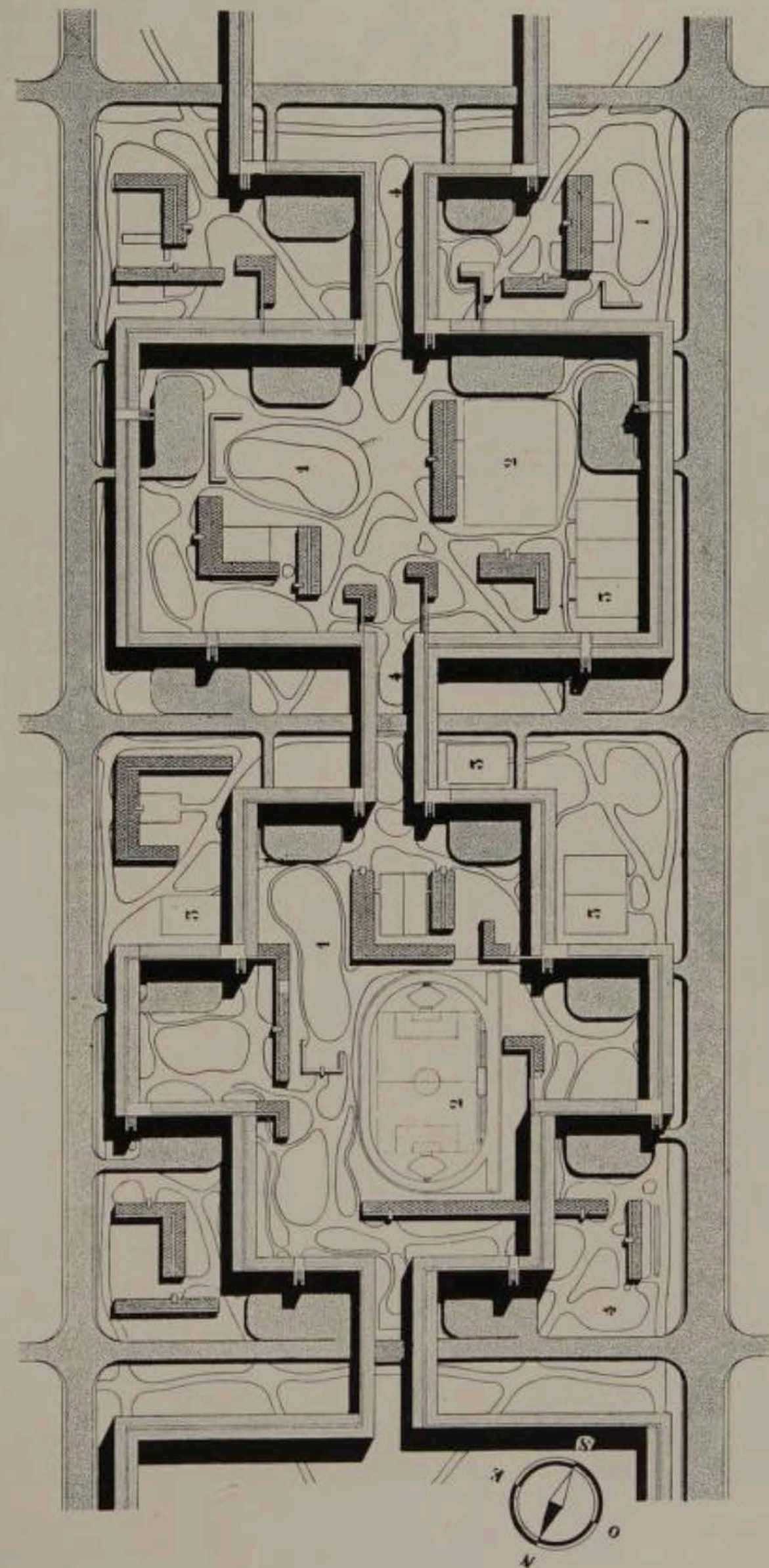
Light manufacturing
Freight yards, warehouses
Heavy industry

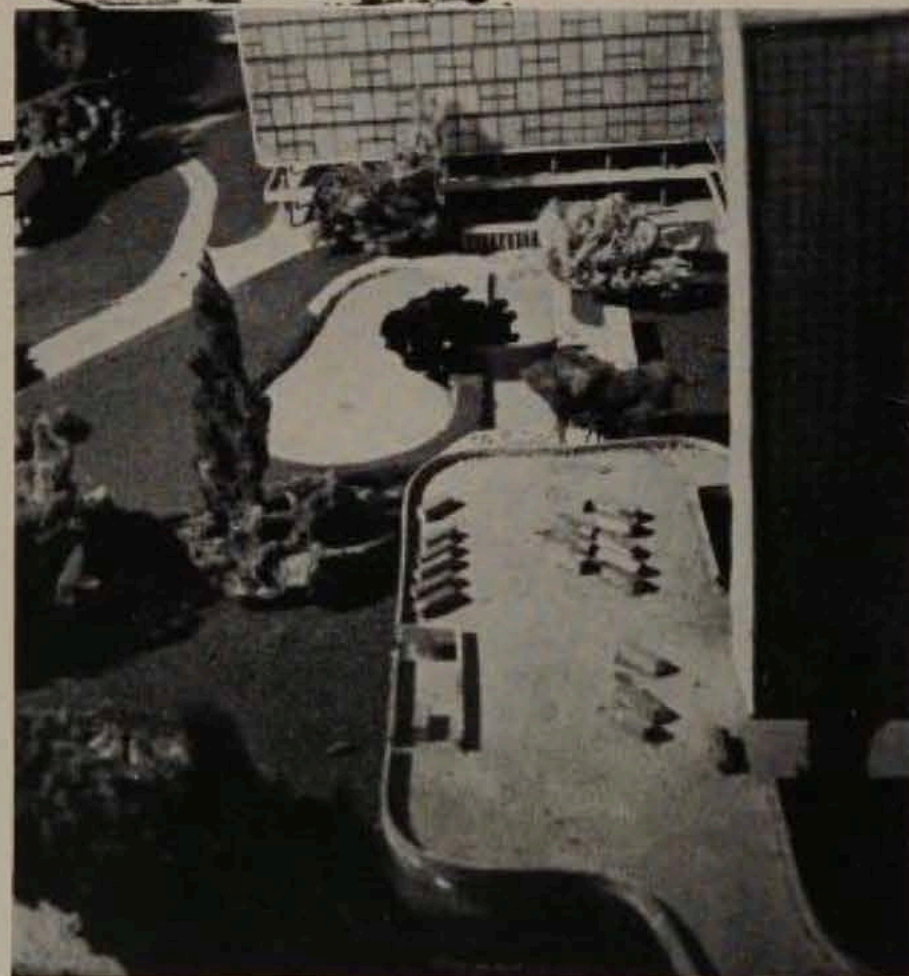
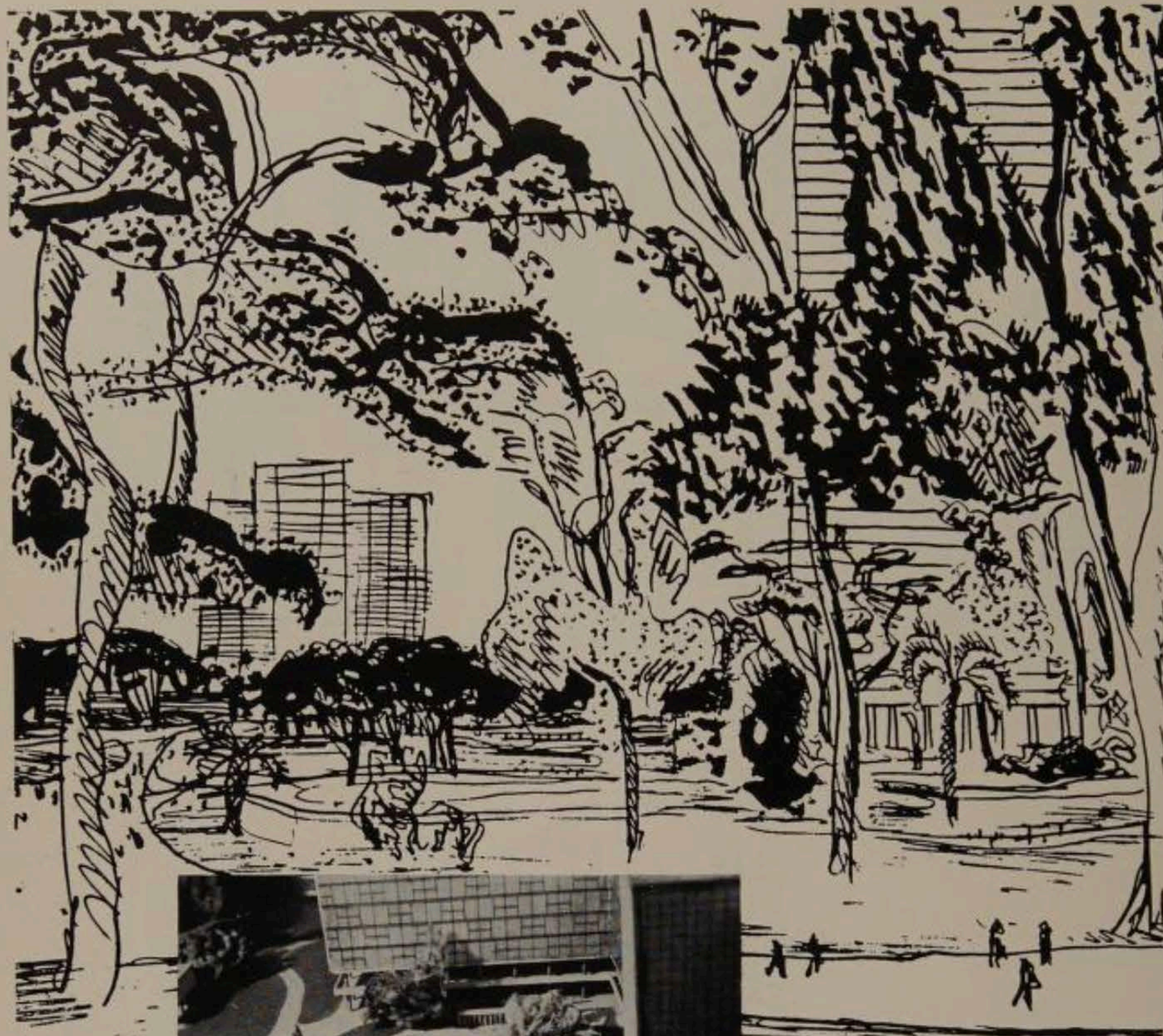
1930. **The Radiant City.** The previous concentric plan is considerably revised to allow a normal organic growth for the city. Now Le Corbusier comes to the belief that "the essence of the city is the dwelling area"; it occupies the most central location, with possible expansions on the right and left toward the open country. The civic center is on the main axis; the business area on the top; light manufacturing, freight yards, and heavy industries are at the bottom. The diagram on the upper opposite page shows the extreme simplicity of the traffic pattern—an orthogonal system with superimposed diagonals. The diagram (bottom right) of the subway system shows an equal simplicity.



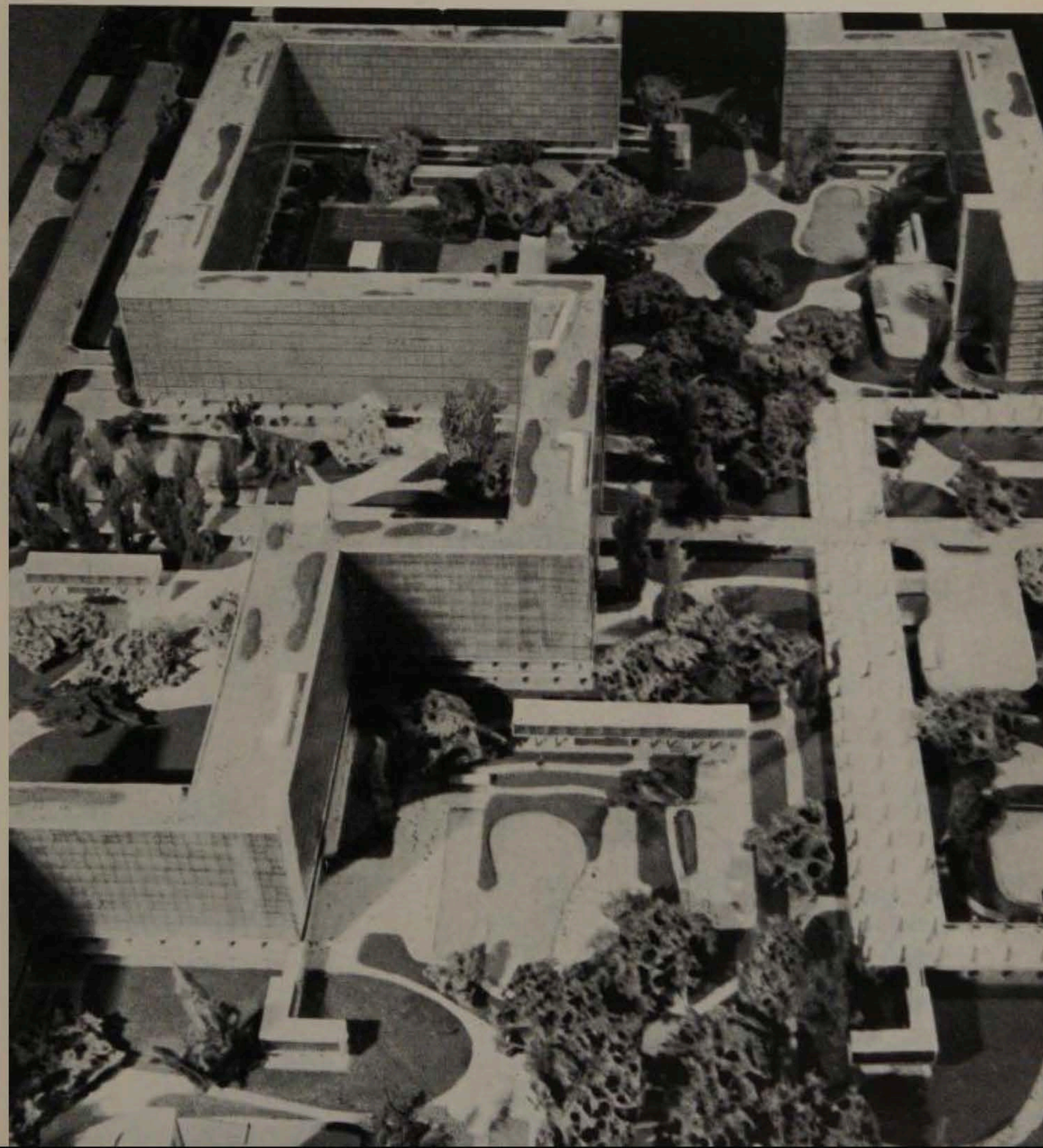


A comparison between residential patterns of old cities, Paris, New York, Buenos Aires, and the Radiant City, drawn at the same scale. The density of Radiant City is 400 people per acre. On the opposite page: detail of two residential blocks 1,300 feet by 1,300 feet each, making two complete neighborhood units. (1) Swimming pool, (2) stadium, (3) tennis courts, (4) children's playgrounds. The lower buildings are kindergartens and elementary schools. Nurseries are located within the residential buildings. Parking space is provided at the entrances of the buildings.

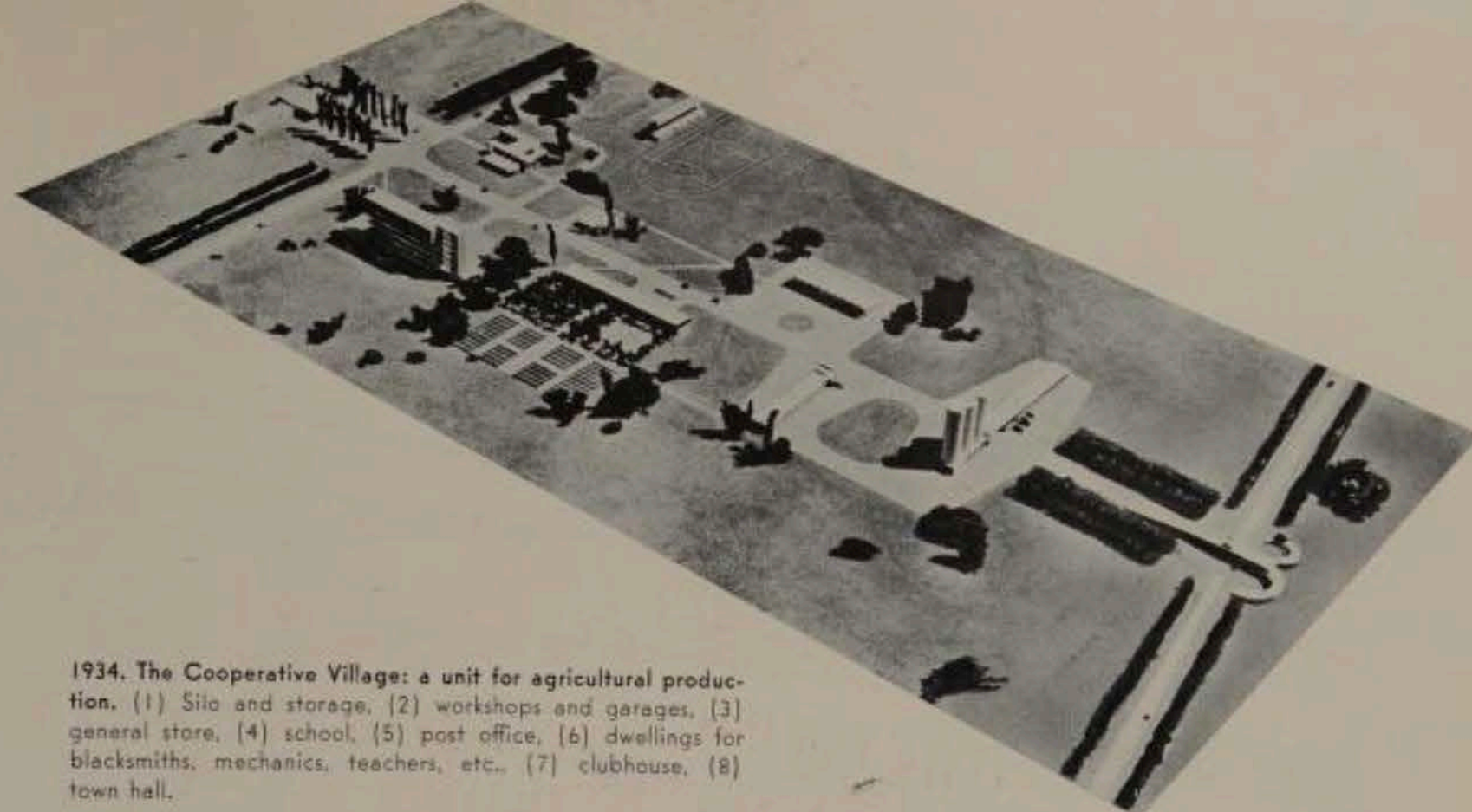
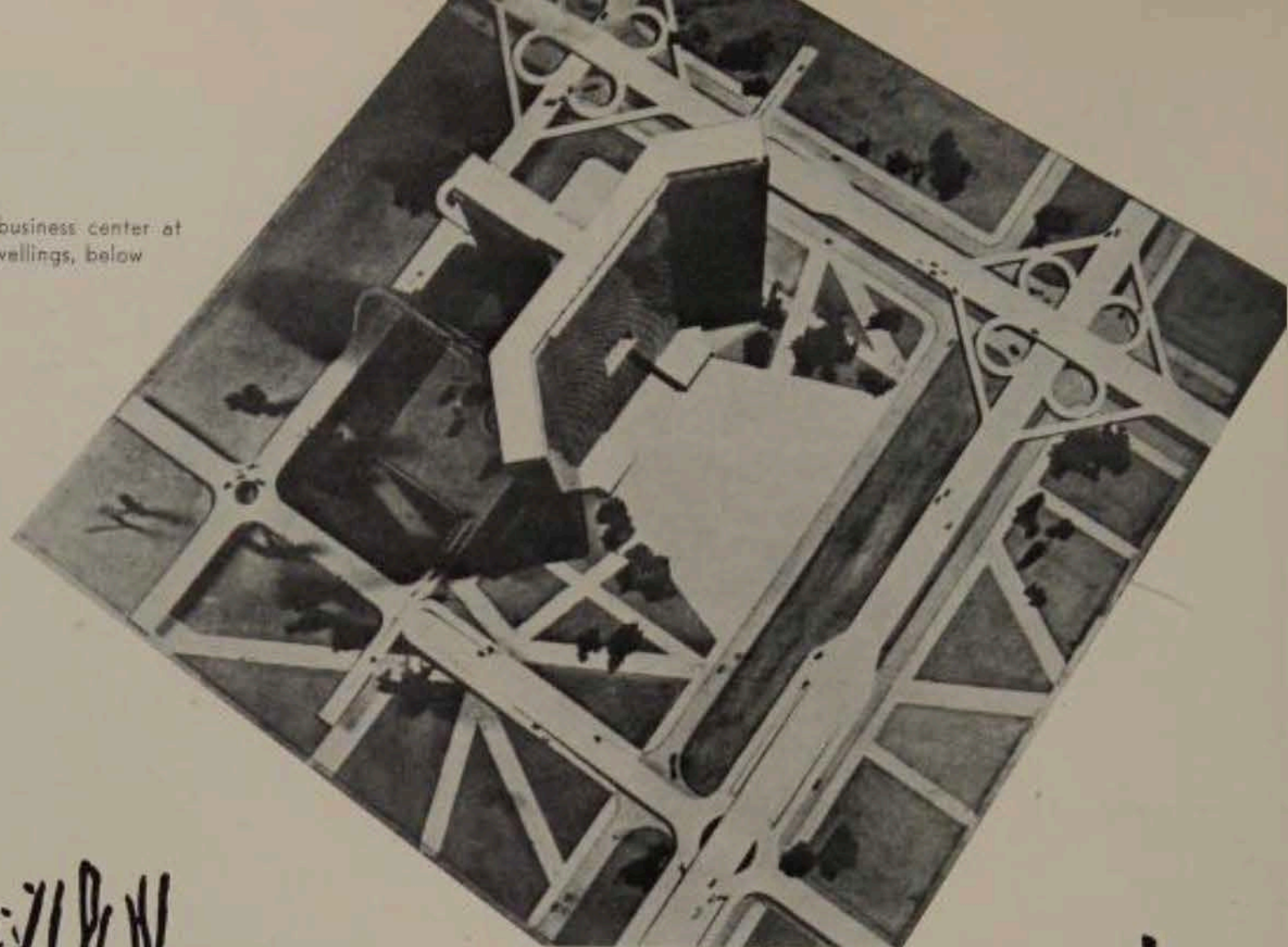




Skyscraper in the business center.
Left and opposite page: details of
the residential area.

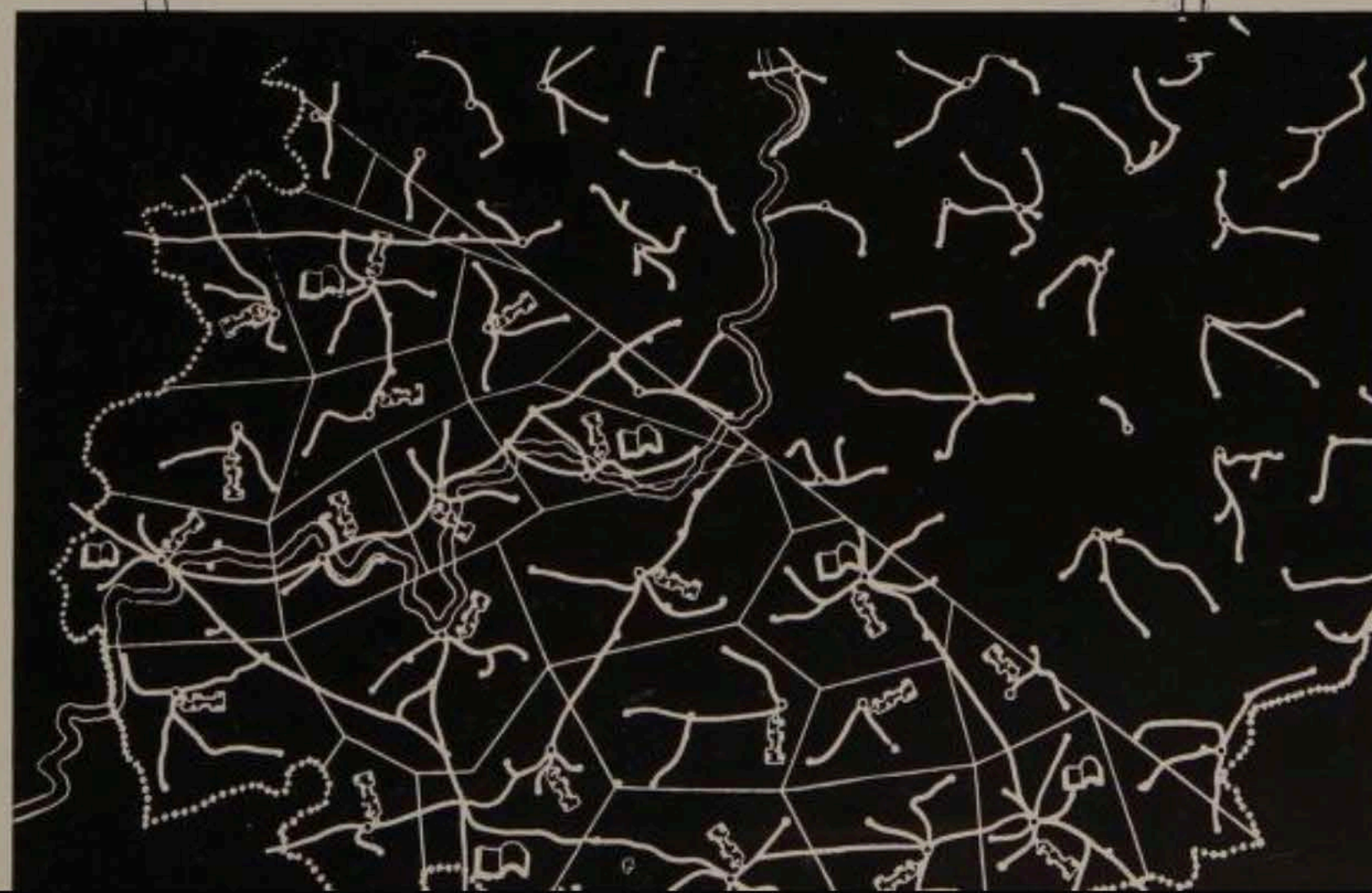
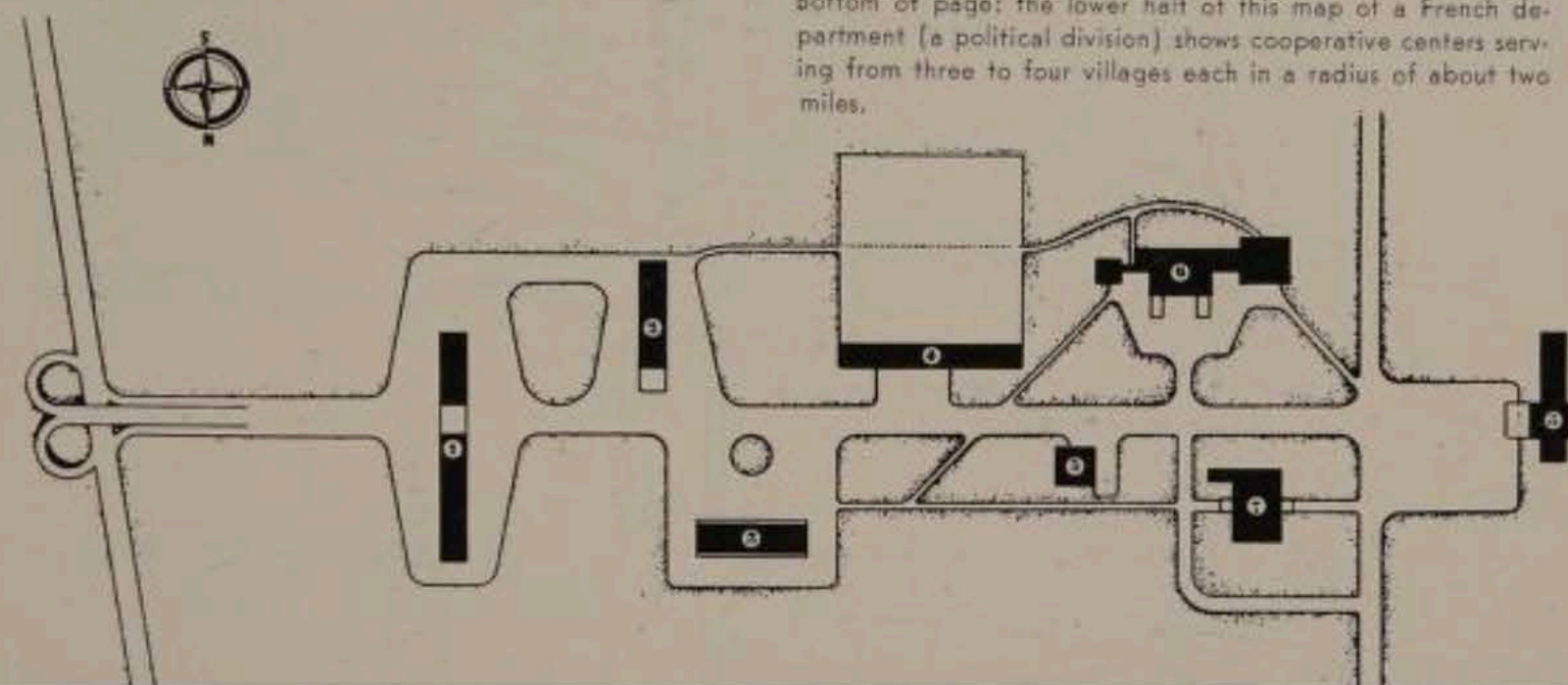


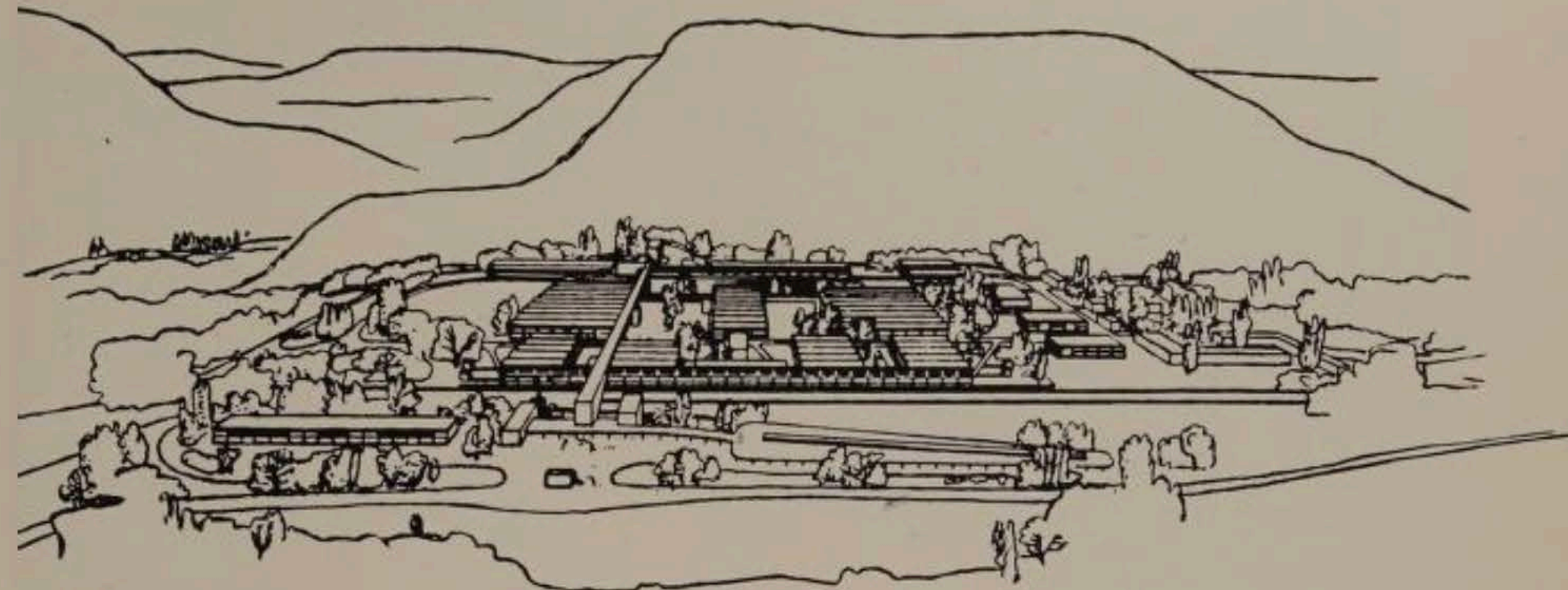
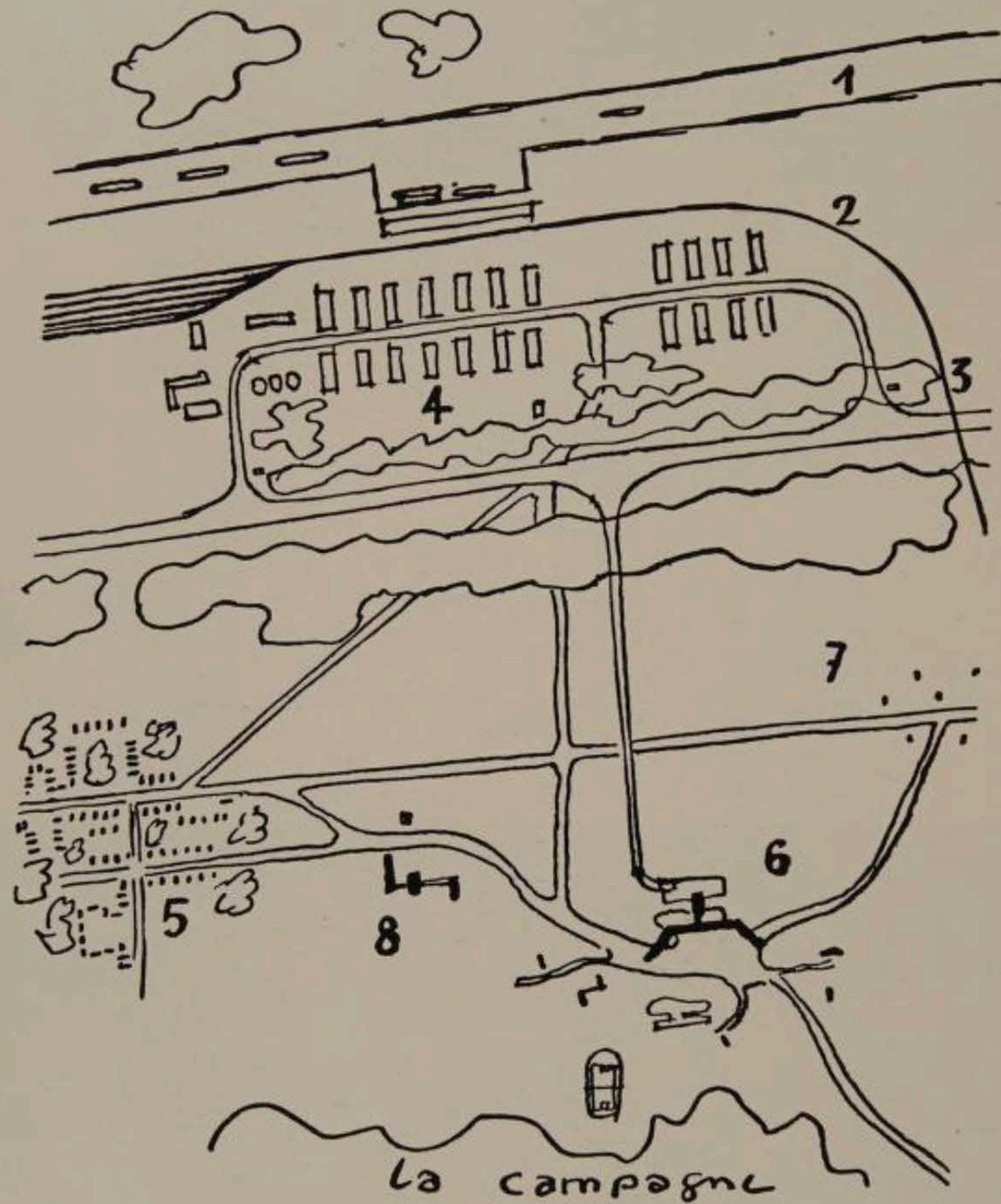
A block in the business center at the right, and dwellings, below



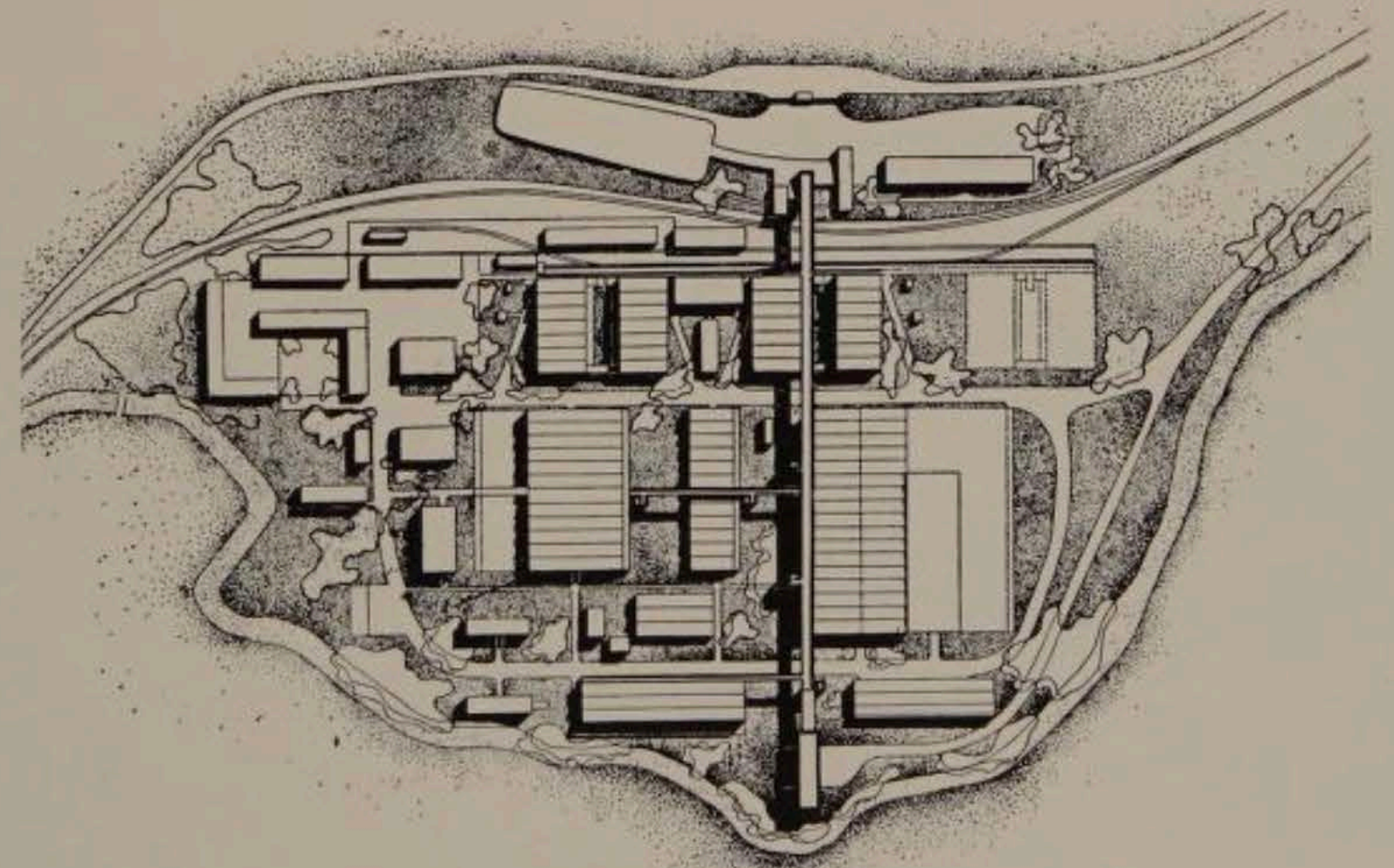
1934. The Cooperative Village: a unit for agricultural production. (1) Silo and storage, (2) workshops and garages, (3) general store, (4) school, (5) post office, (6) dwellings for blacksmiths, mechanics, teachers, etc., (7) clubhouse, (8) town hall.

Bottom of page: the lower half of this map of a French department (a political division) shows cooperative centers serving from three to four villages each in a radius of about two miles.



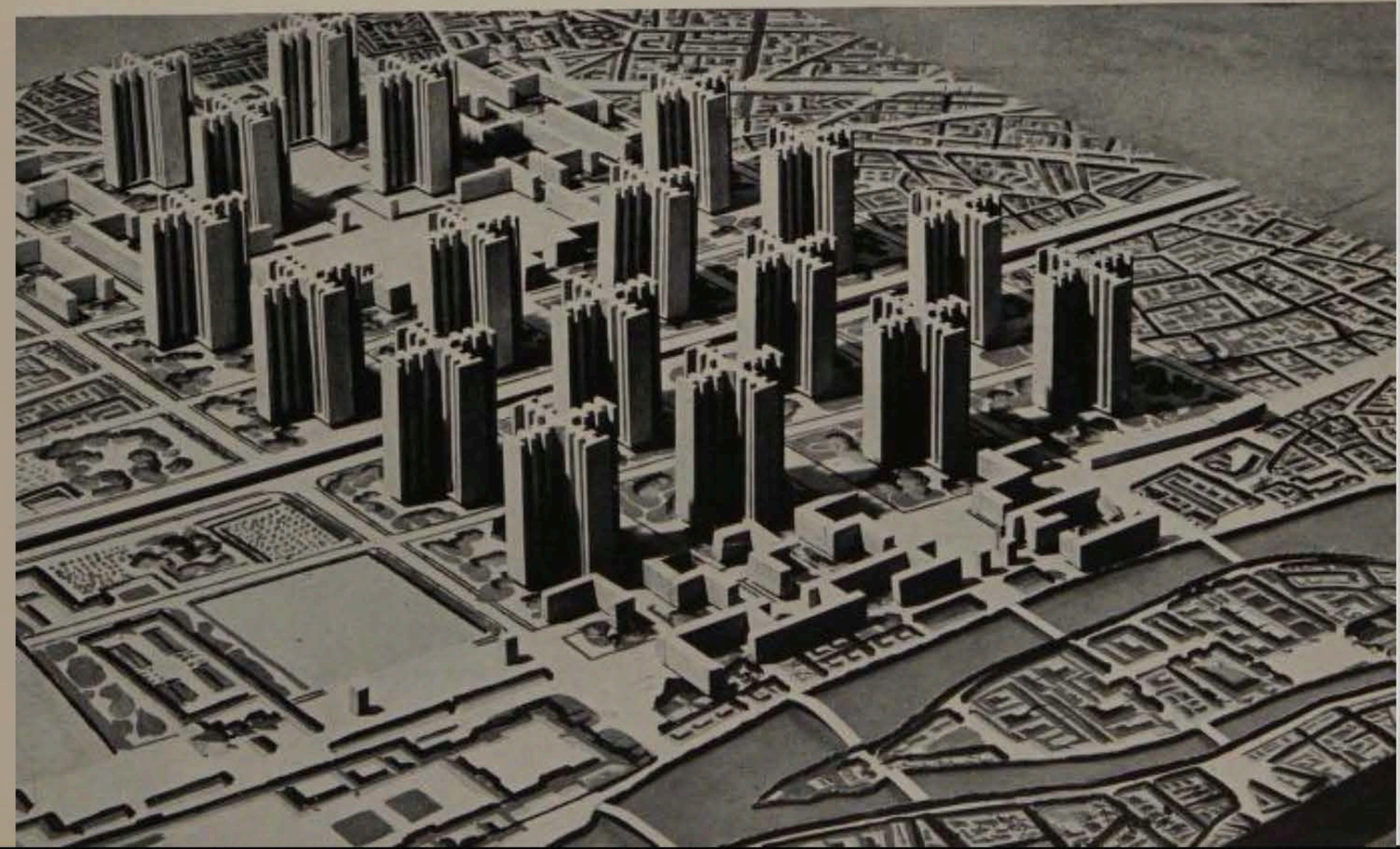
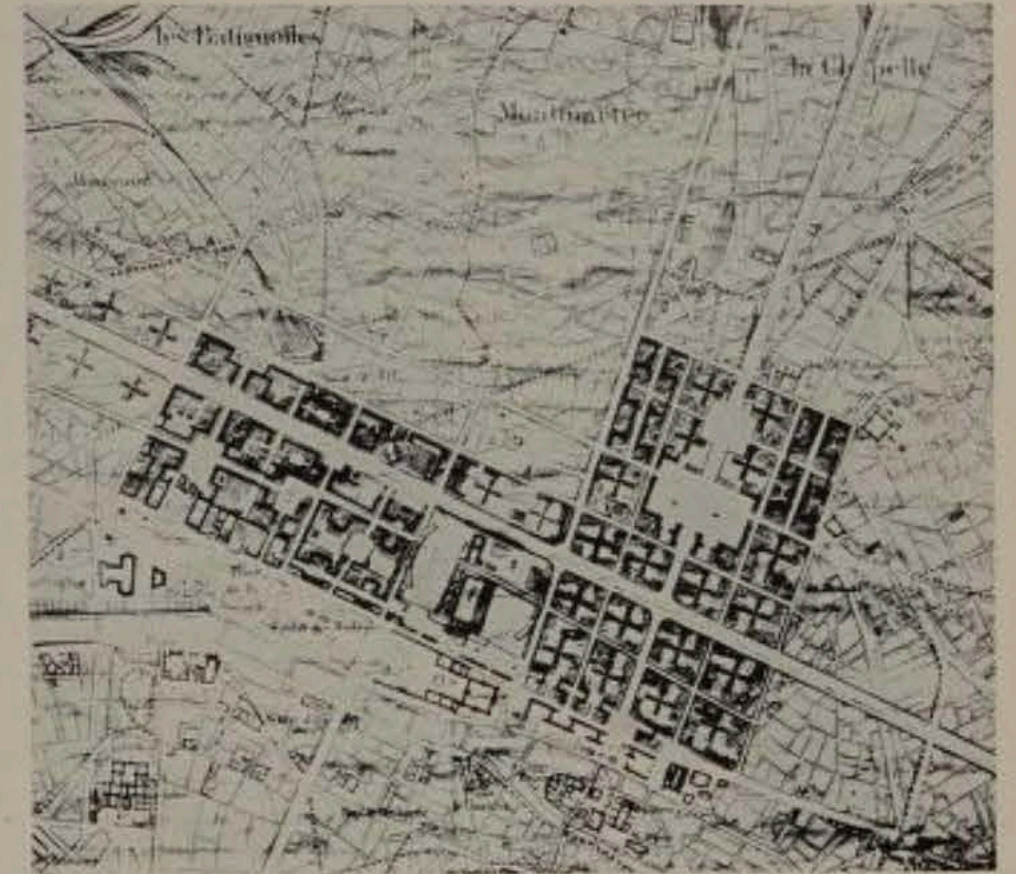


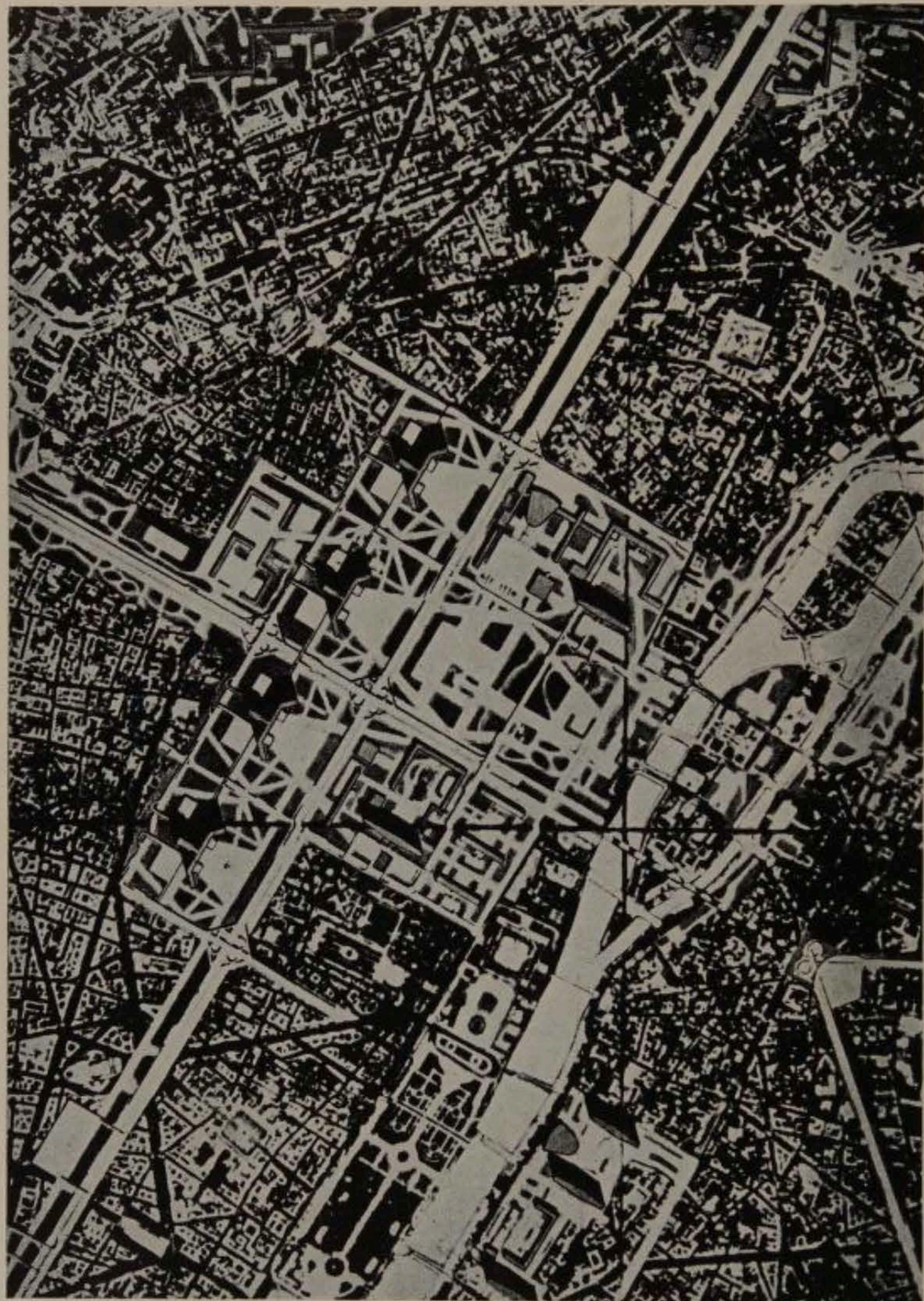
1942. The Linear Town: a unit for industrial production. All functions, dwelling, work, recreation, are within walking distances. Time-distance here becomes a major element of design. (1) Waterway, (2) railroad, (3) highway, (4) manufacturing plant, (5) garden city, (6) civic center, apartment houses (vertical garden city), (7) green zone, (8) school. On this page: layout of a "green" factory for a linear industrial town; an attempt to place the manufacturing plant "under conditions of nature" such as light, air and greenery.



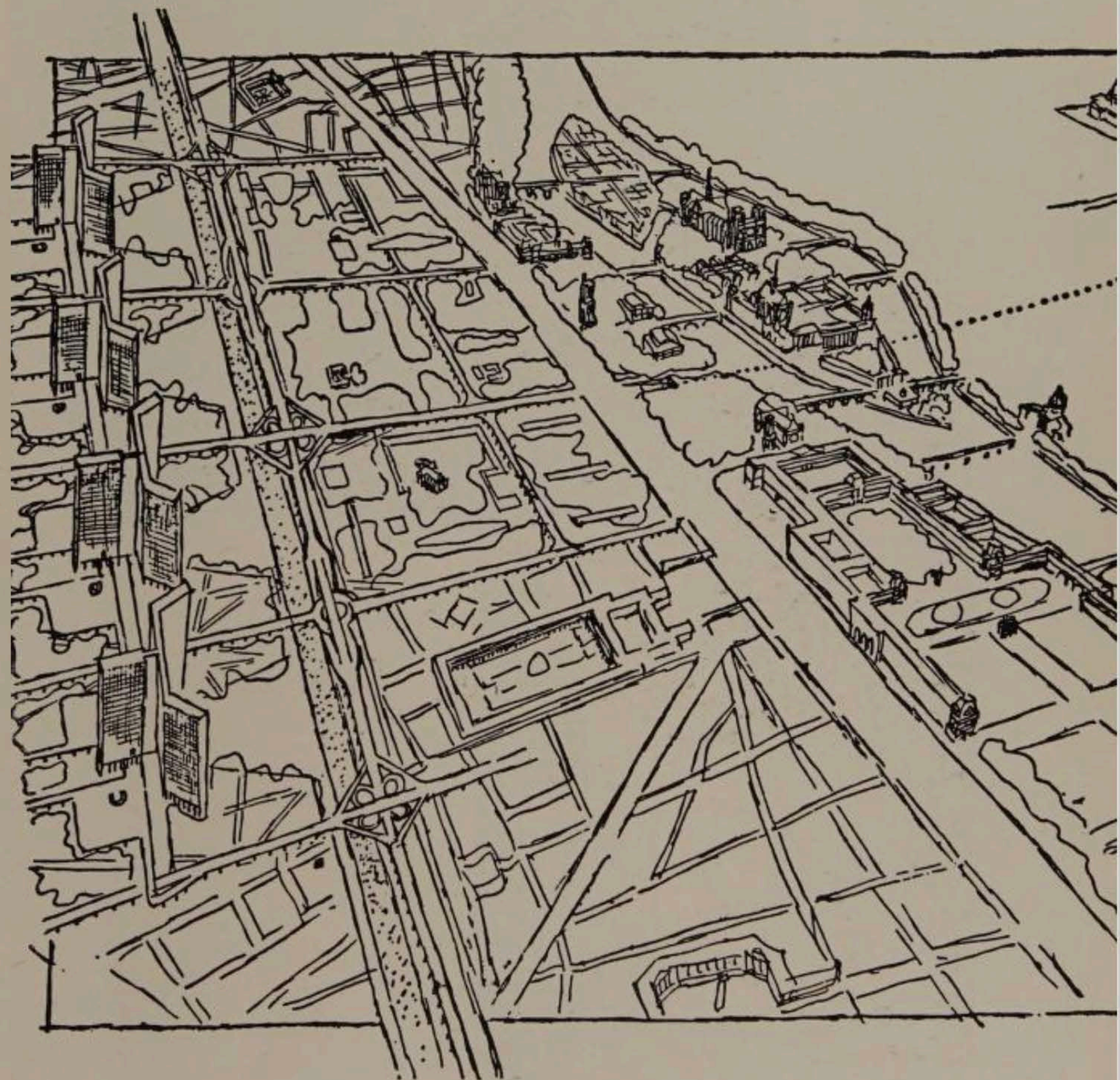
2. case studies

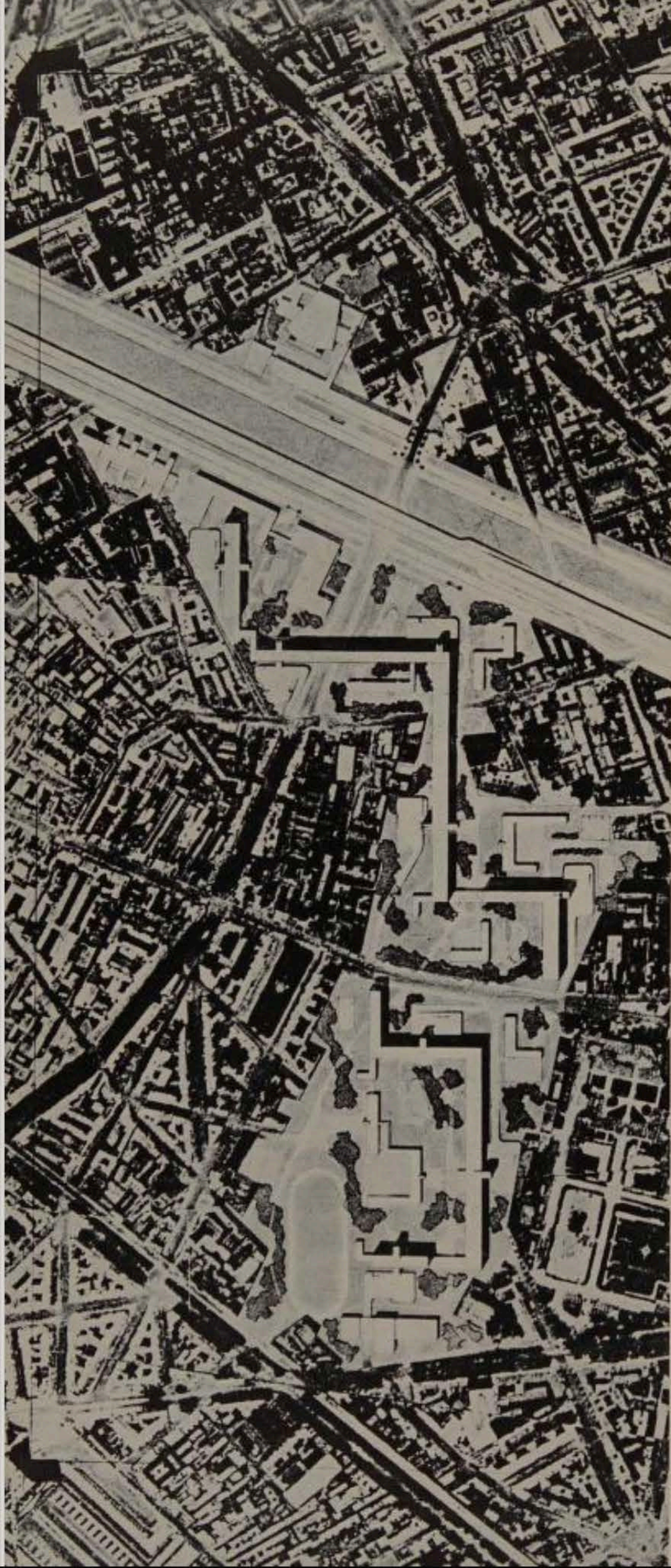
1925. The Plan Voisin of Paris. First application of the concentric city pattern (see page 89) for the creation of a new business and residential center in Paris. Chief characteristics: the city lots become a park (5 per cent of built area); the historical buildings are left free from the surrounding obsolete constructions; a new east-west, through-traffic artery is opened to take the load from the Champs Elysées; eighteen skyscrapers 650 feet high are provided for the business section in the west, and lower (160 feet high) residential buildings in the east; the underground railroad station is located between the business and the residential center.



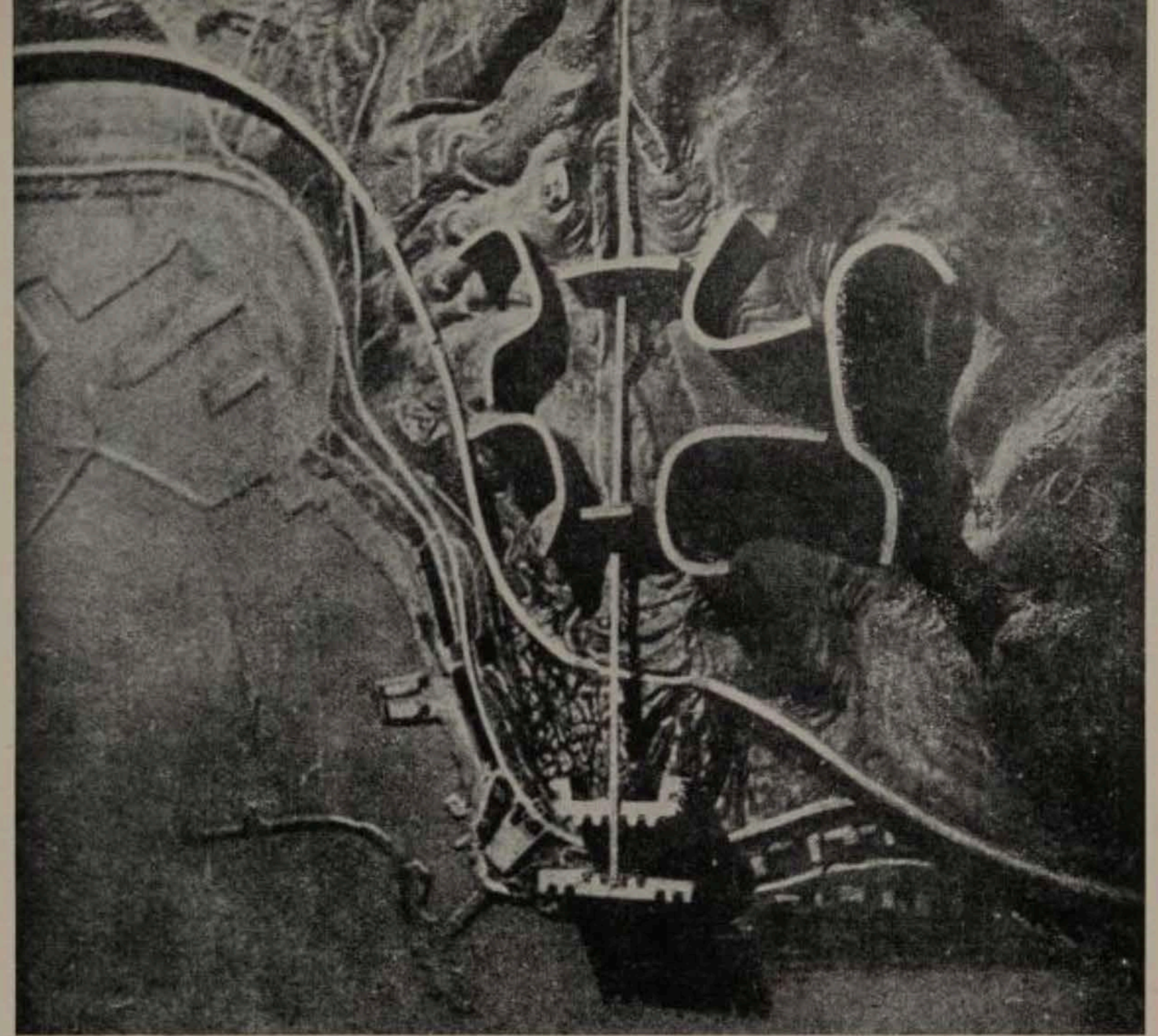


1937. Plan of Paris with an east-west and north-southeast and southwest axis. On the opposite page: the business center, the government center (bottom), and dwelling units (upper right) as a beginning of slum clearance. Below: the business center along the east-west highway.

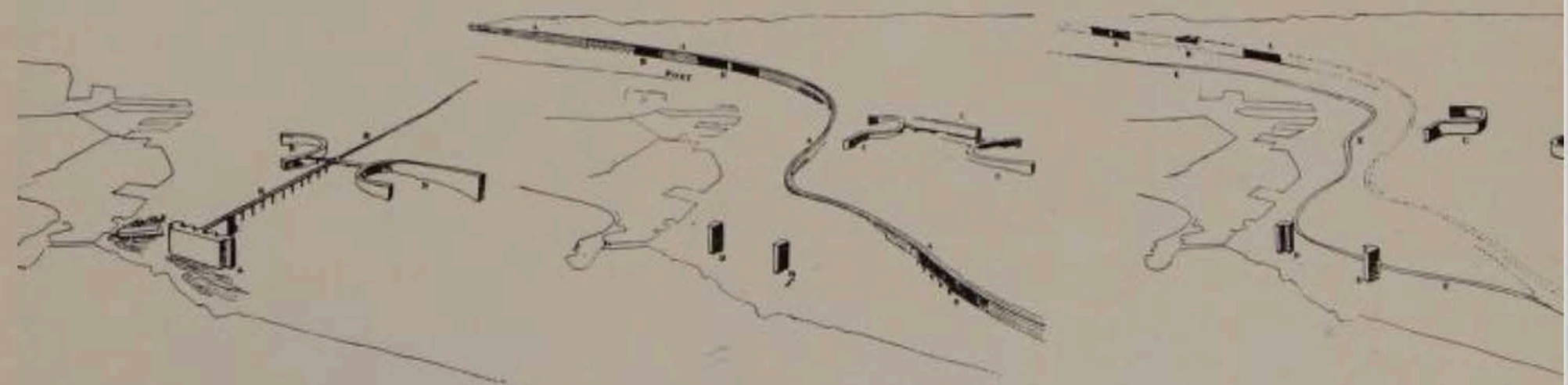


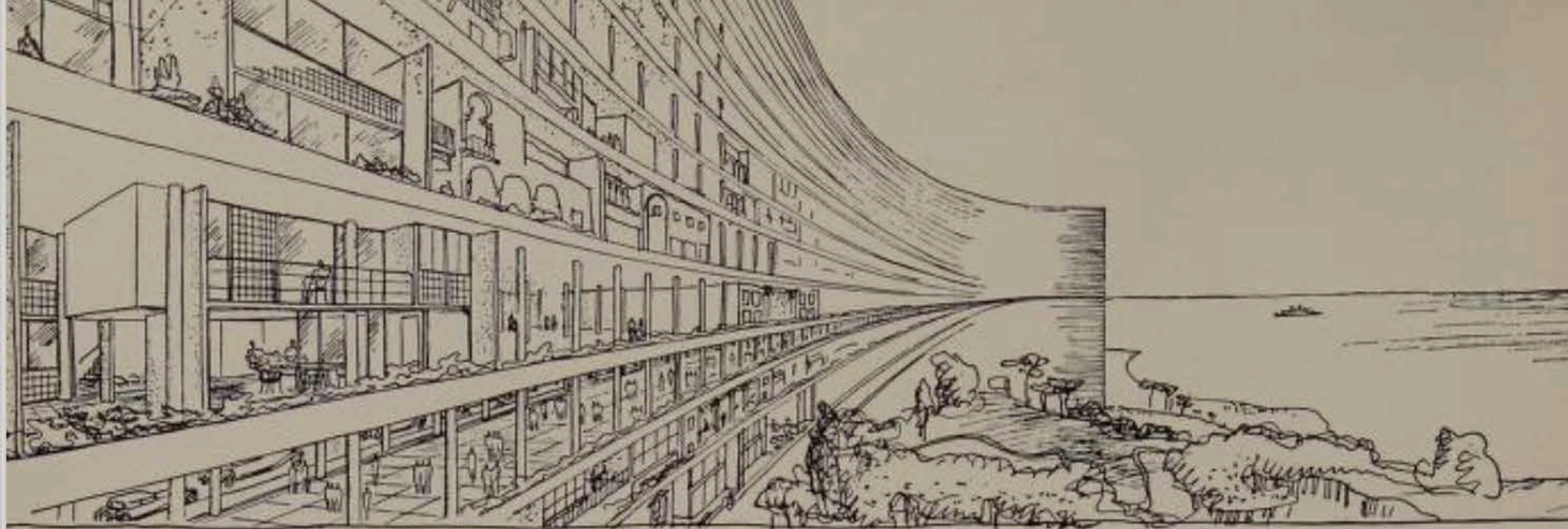


Paris slum clearance: a residential group for 18,000 people south of the east-west highway. The site is known as slum section No. 6, one of the worst in the city of Paris.

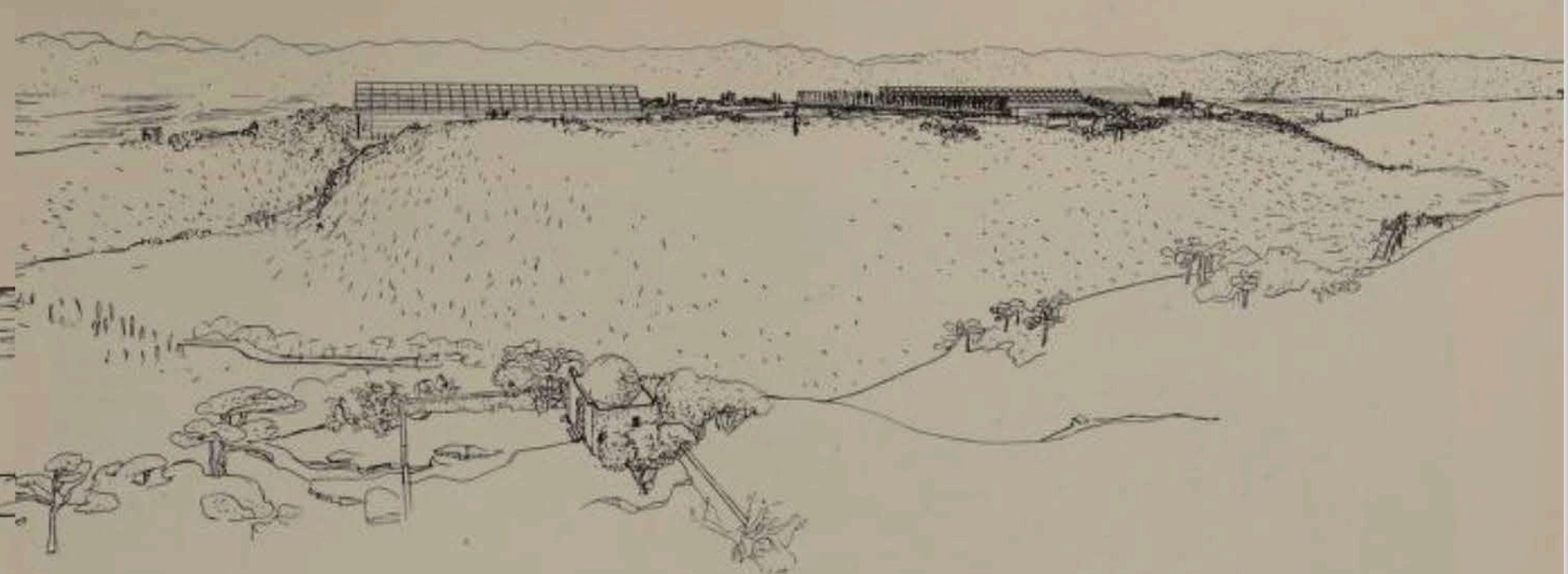


1931. Plan for Algiers. Above: view from the port and the business center known as Quartier de la Marine. Below: preliminary sketches showing the order in which the various elements could be built. The city of Algiers, located between a high cliff, the Fort de l'Empereur, and the sea, presents a difficult problem of extension required by normal growth. The top of the cliff offers good ground for a settlement, but it is inaccessible from the old town. Le Corbusier's project, based on some old Roman enterprises and on a thorough air reconnaissance of the terrain, proposes the following: an elevated highway 85 feet wide, 8 miles long, at 30 feet above the sea level; an elevated highway of the same width, 9.3 miles long, on top of a 14 story structure, and at 330 feet above the sea level; a 31 story administration building with a surface of 250,000 square feet; some lower structures with a total surface of 1,750,000 square feet.





The vertical garden city; individual houses are built on multi-story "artificial" lots below the highway.



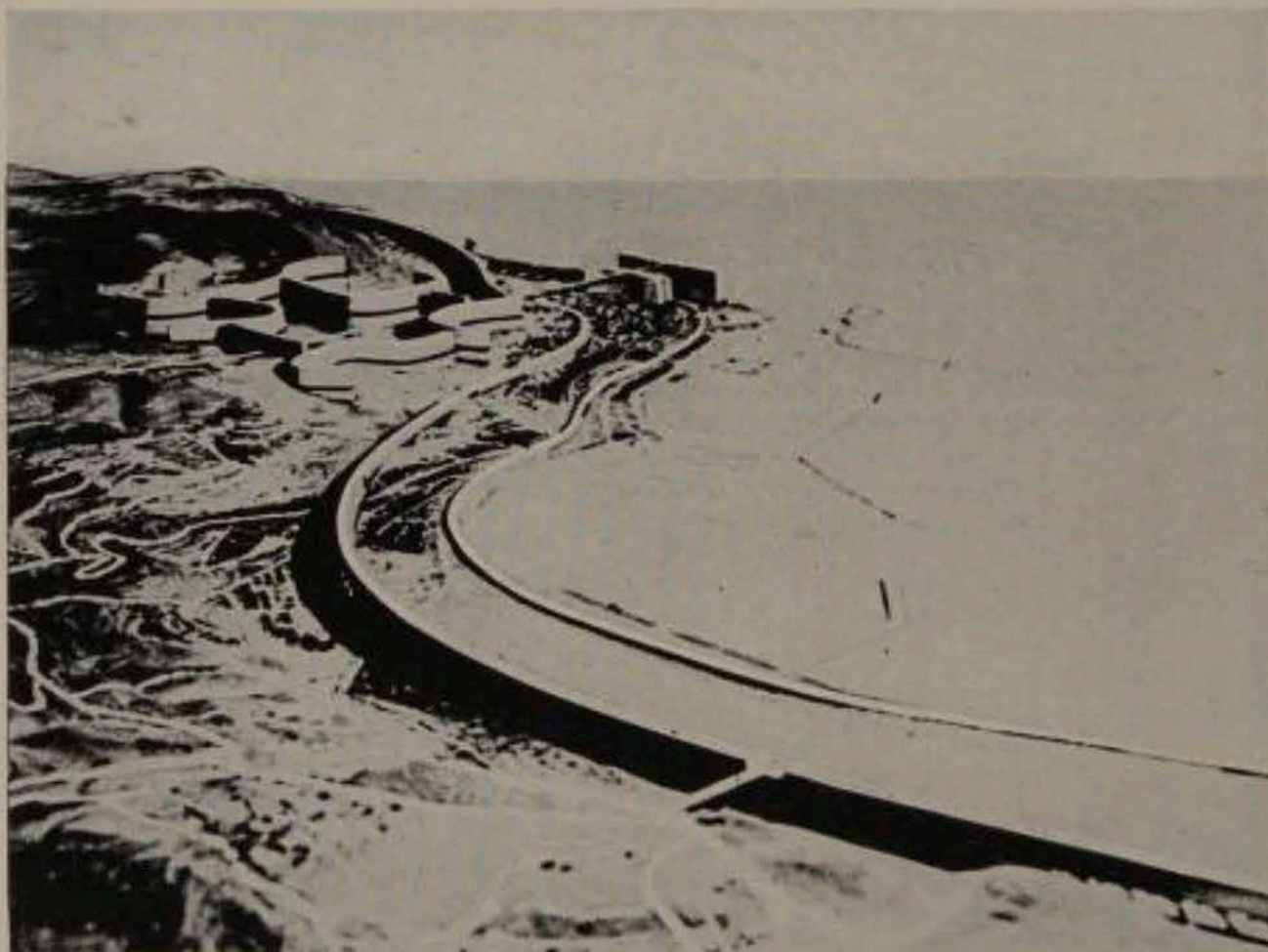
1932. Residential development for Oued-Ouchaia, near Algiers, consisting of four buildings housing 300 families each, and rows of one-family houses. Located on a rugged terrain covered with vines, the tall buildings have a full view of the sea and Mount Atlas.

The business center

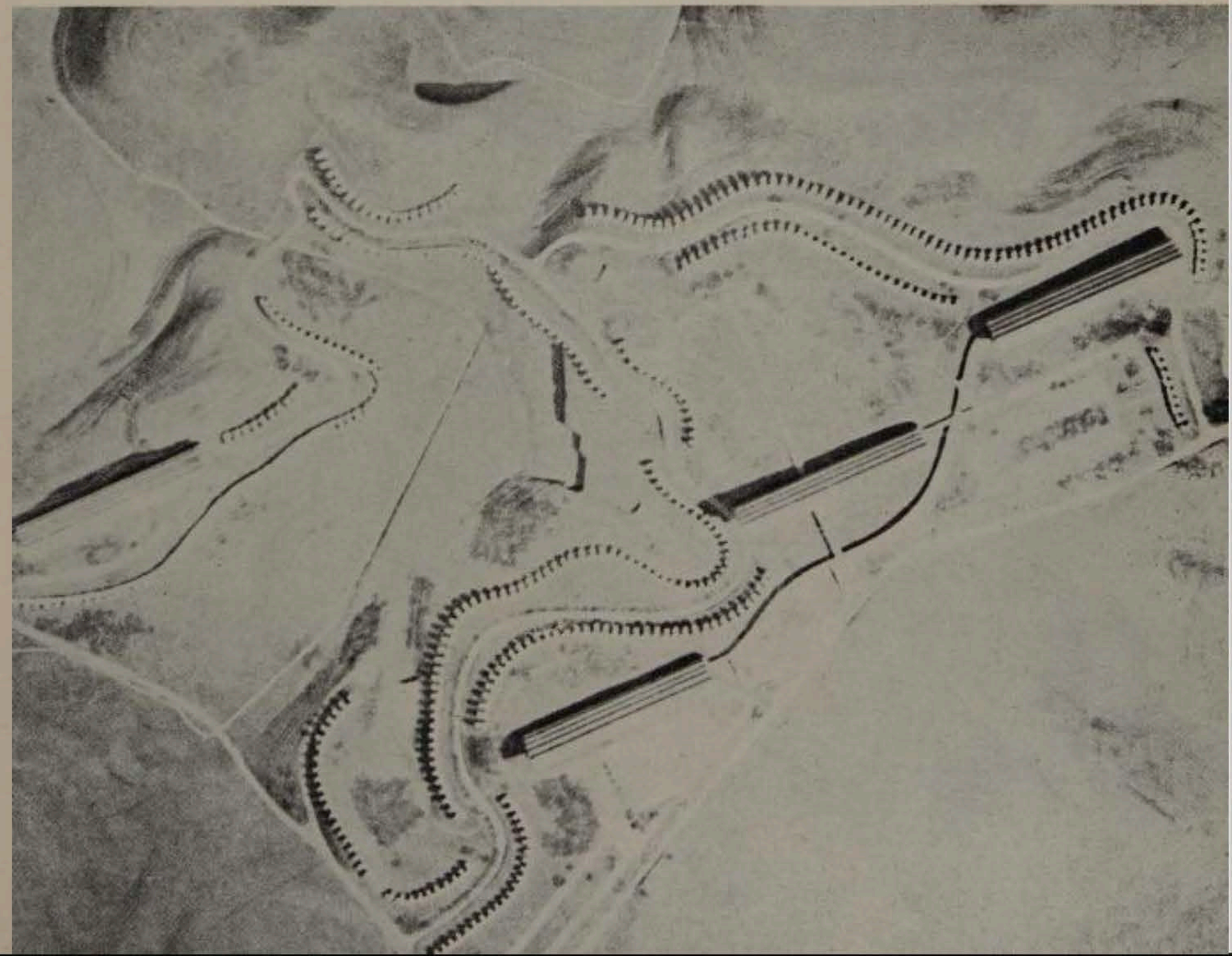
The marine depot

Toward the suburb of Saint-Eugene

The Fort de l'Empereur settlement

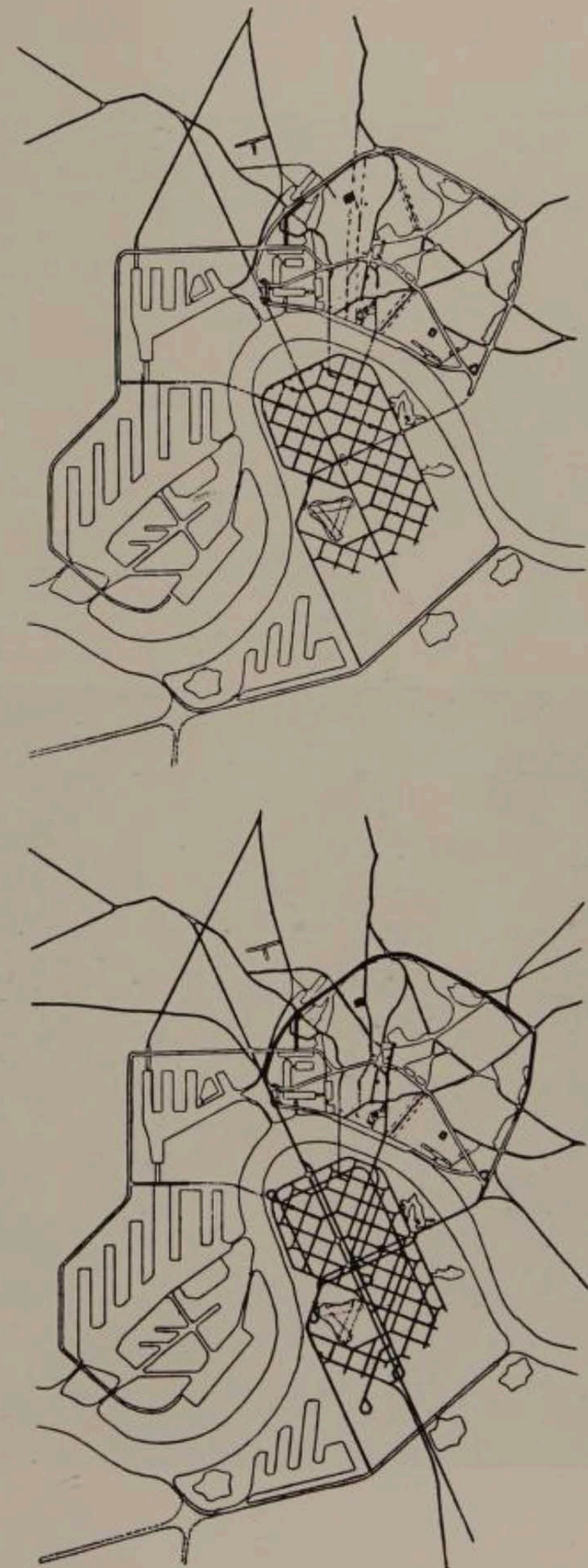


Toward the suburb of Hussein-Dey



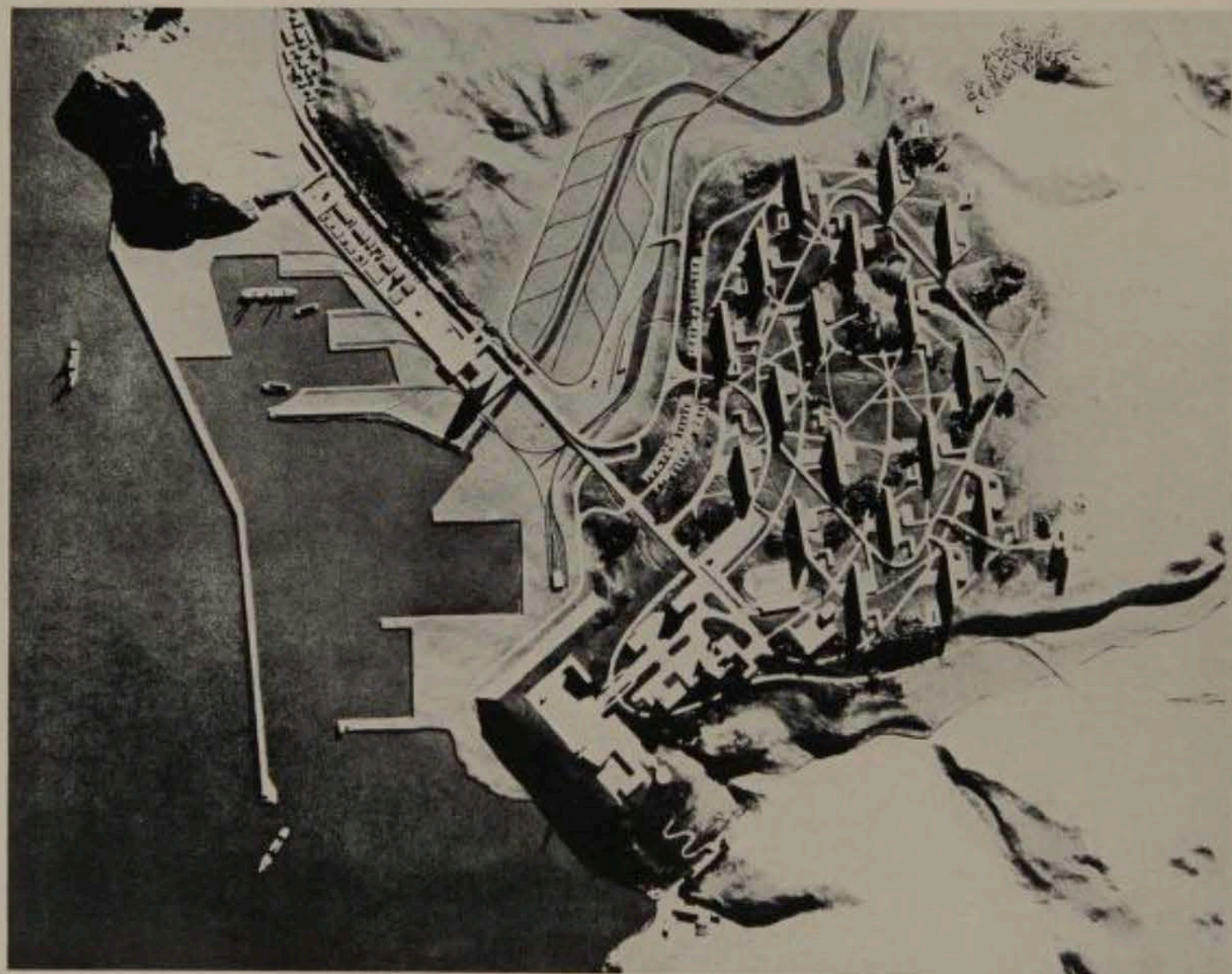


1933. Plans for the development of the left bank of Antwerp, in collaboration with Huib Hoste and Locquet. Radiant City type with 5 per cent to 12 per cent built areas. Opposite page: cultural center (upper left), recreational center (right), marine depot and airport (bottom left). On the main axis, Cathedral Avenue, are office buildings and the administrative center. On this page: Surface cars (top) and subway network (bottom).

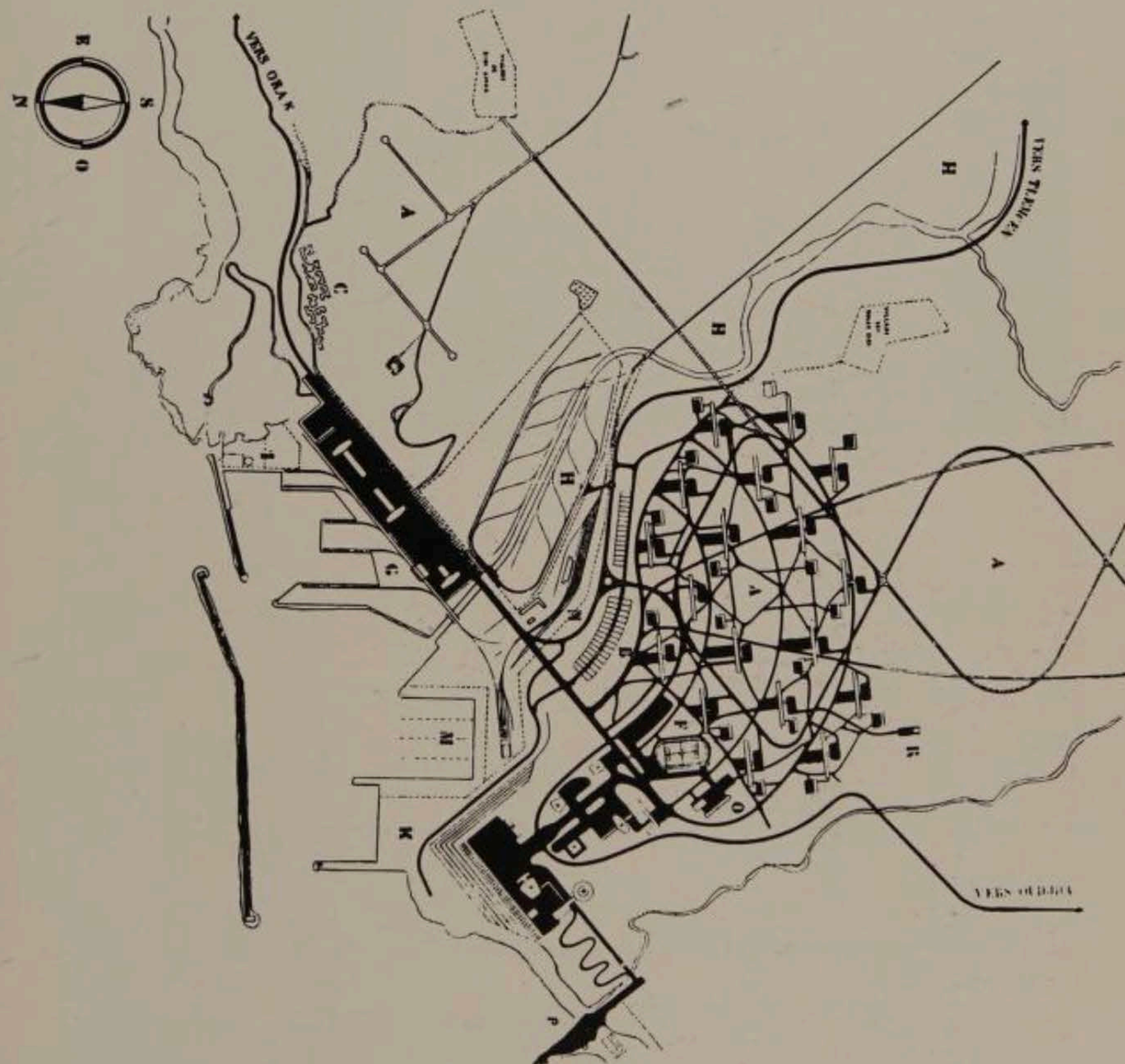


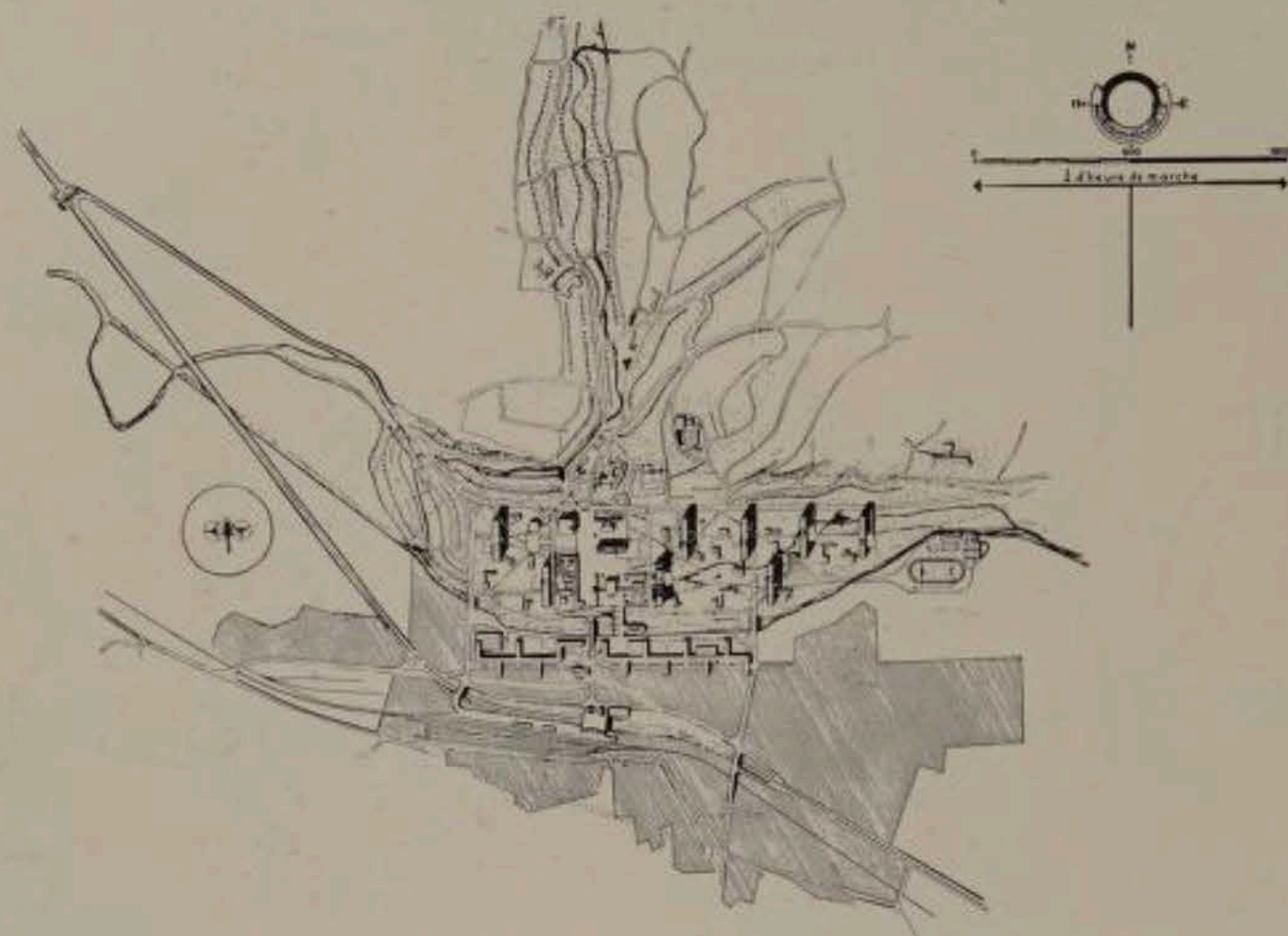


1934. Plans for the town of Nemours, in collaboration with H. Breuillot. The town of Nemours with a population of 3,000 was settled in 1850 on plans developed by the French Army. In the early 1930's the building of a railroad linking Nemours with Fez (French Morocco), and the construction of a new port for the exploitation of the neighboring mines, presupposed a corresponding growth of the population. Le Corbusier's plans provide immediate accommodations for 38,000 new inhabitants, with the possibility of doubling this number in the future.

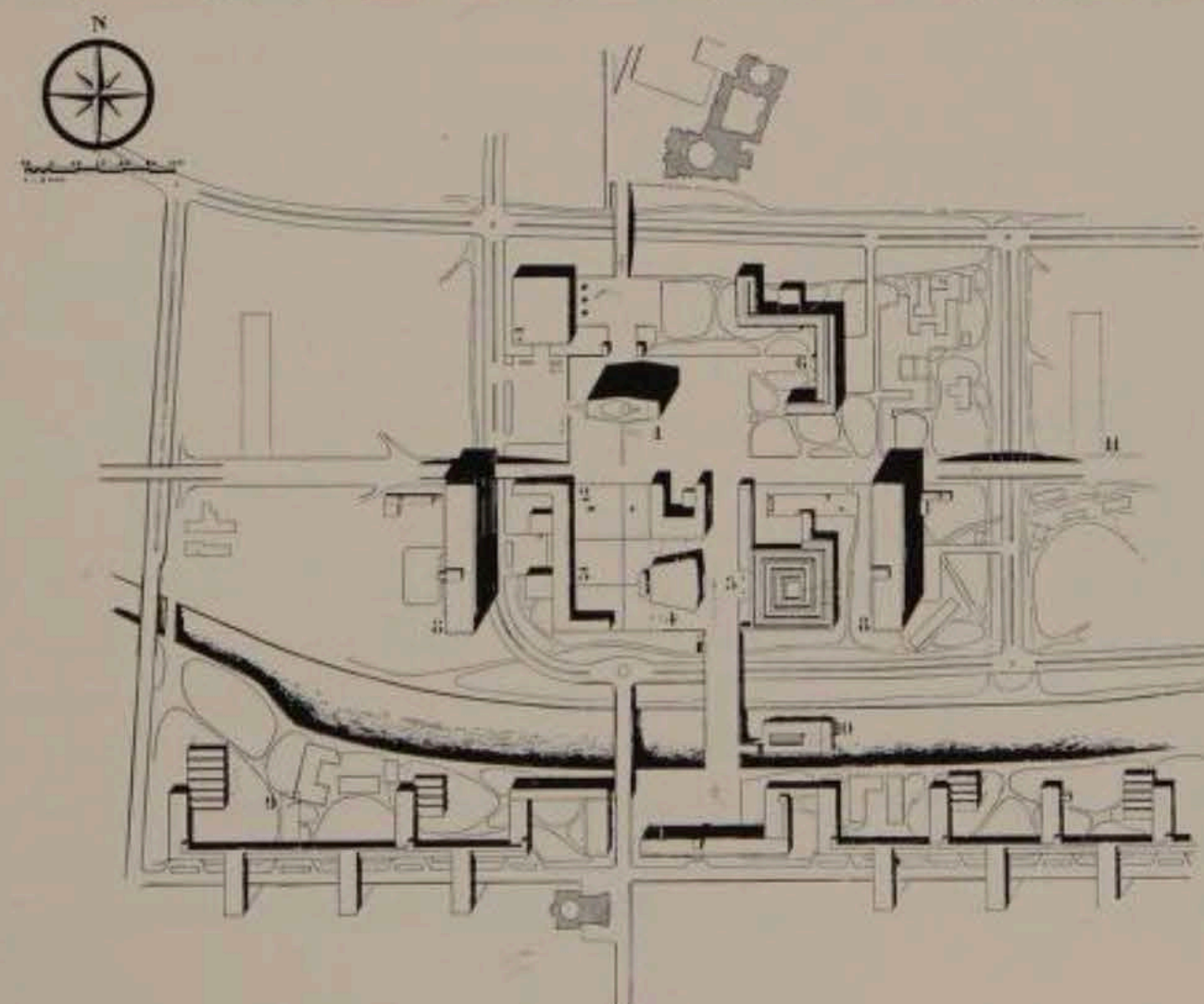


(A) residential zone, (F) civic center and recreational facilities, (H) industrial zone, (G) shipping and business center, (K and M) fishing industries, (N) railroad yards.





1945. Plans for the reconstruction of the town of Saint-Dié, an application of the "linear industrial town" (see page 98). The immediate problem of this town of small industries is to house 10,000 people who became homeless during the last phases of the war. The major destruction occurred in the oldest section of the town, the original settlement, shown with a white outline on the plan (opposite page, top). Four residential units are proposed to house 6,000 people; individual houses, located in a garden-city pattern, will house the rest of the homeless. The scale of one kilometer (upper right) represents fifteen minutes of walking distance. On the lower part of the opposite page is the detail of the civic center, accessible only to pedestrian traffic. (1) Administration building, (2) tourist and folk-art center, (3) coffee houses, (4) community building, (5) museum, (6) hostelry, (7) shopping center and parking lot, (8) residential units for immediate erection, (9) manufacturing plants, (10) swimming pool, (11) residential units to be built at a later date.



painter

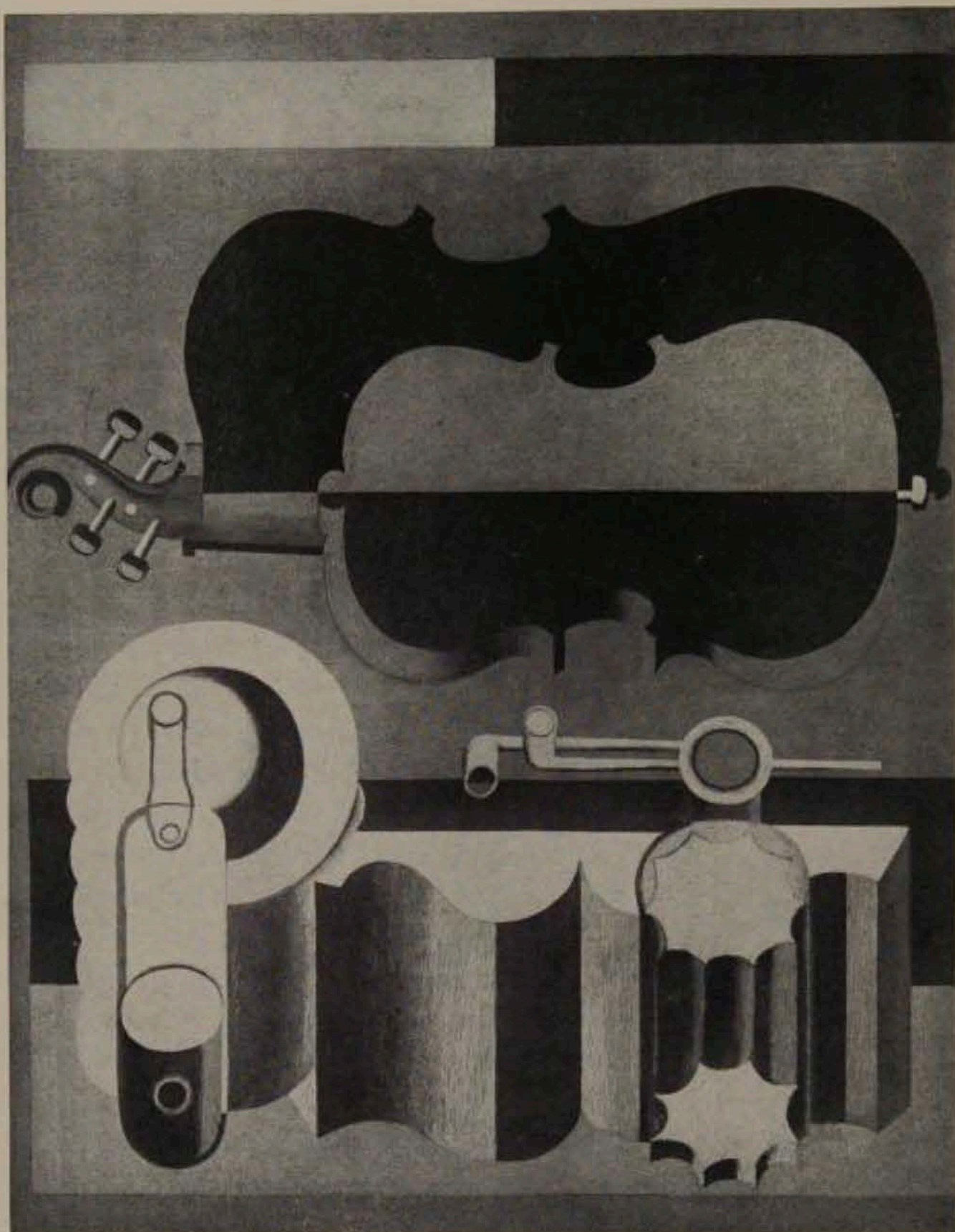
Le Corbusier the painter

BY JAMES THRALL SOBY

When the First World War came to an end, two opposite courses were followed by certain European artists whose careers were then getting under way. In Central Europe and Paris, the Dadaists continued to profess a war-born despair so deep that only the ferociousness of their nihilism gave them a goal for survival. Theirs was an art of deliberate indignity, carried to such a point that it arrived at dignity again. They ridiculed themselves and their cultural heritage until at last they attained a state of resistance and creative renewal.

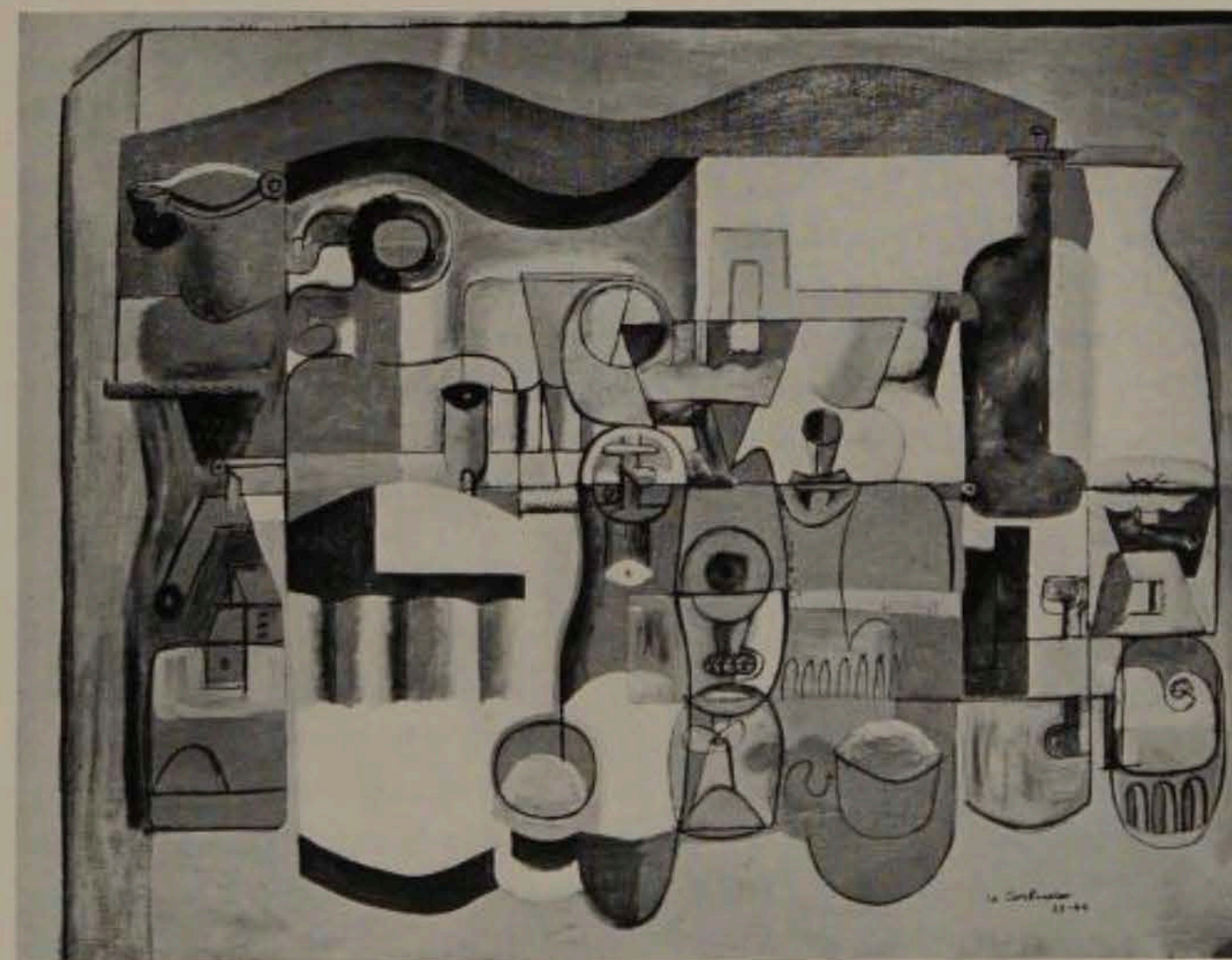
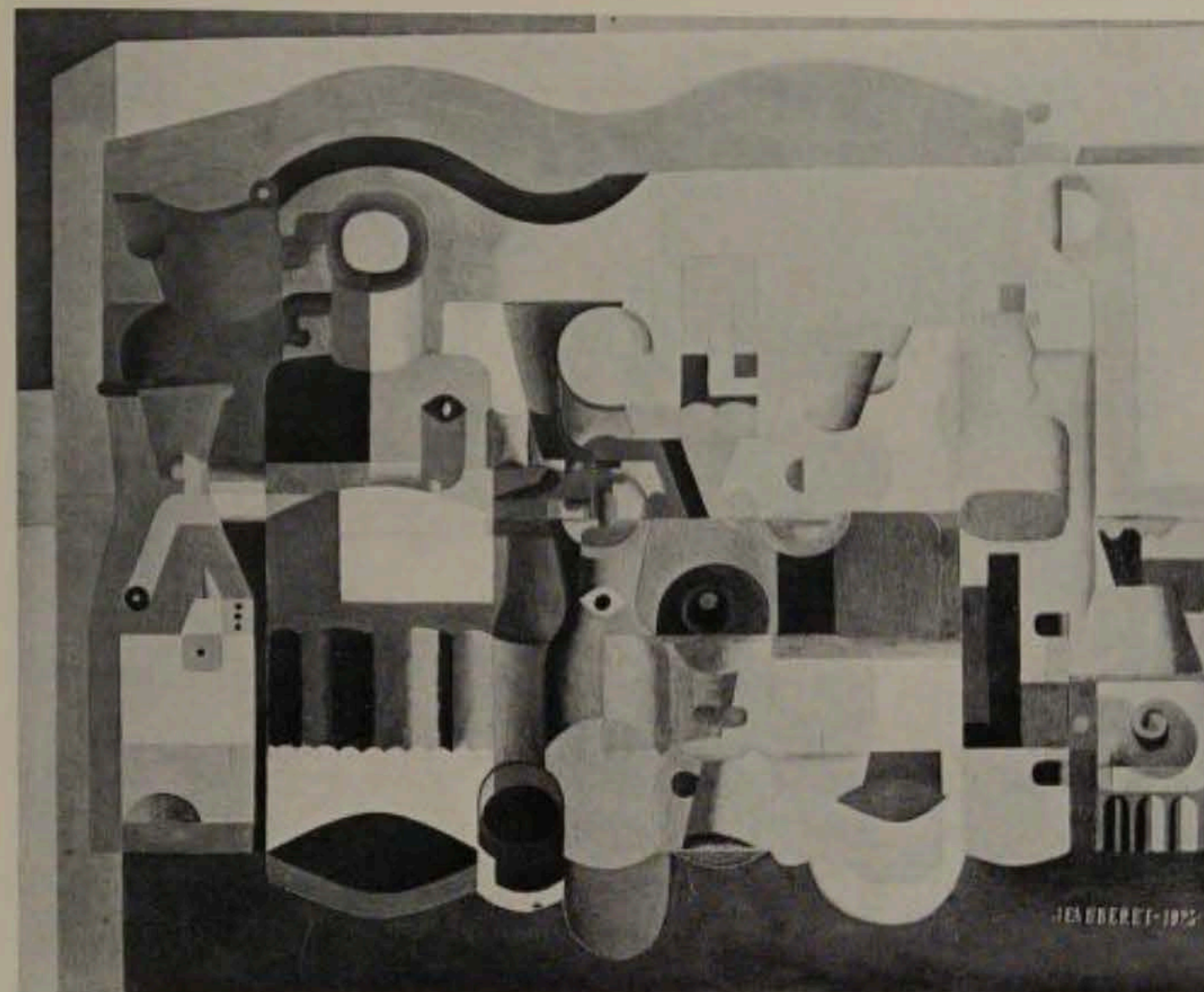
Another course was taken by Charles Edouard Jeanneret and Amédée Ozenfant, founders in 1918 of the movement they called "Purism." Far from trying to discredit painting in general, they wished to improve cubism, already perhaps the most creditable art of their own time; far from attempting to sully the past, they revered Ingres, Cézanne and Seurat, and hoped to purify the austere discoveries of Picasso and Braque, made only ten years before. Unlike the Dadaists, they believed in tradition and progress. Indeed, nothing affords a more absolute contrast than Marcel Duchamp's Dadaist gesture in affixing a mustache to the *Mona Lisa* and the efforts of Jeanneret and Ozenfant to pluck from later cubism its idiosyncratic ornament.

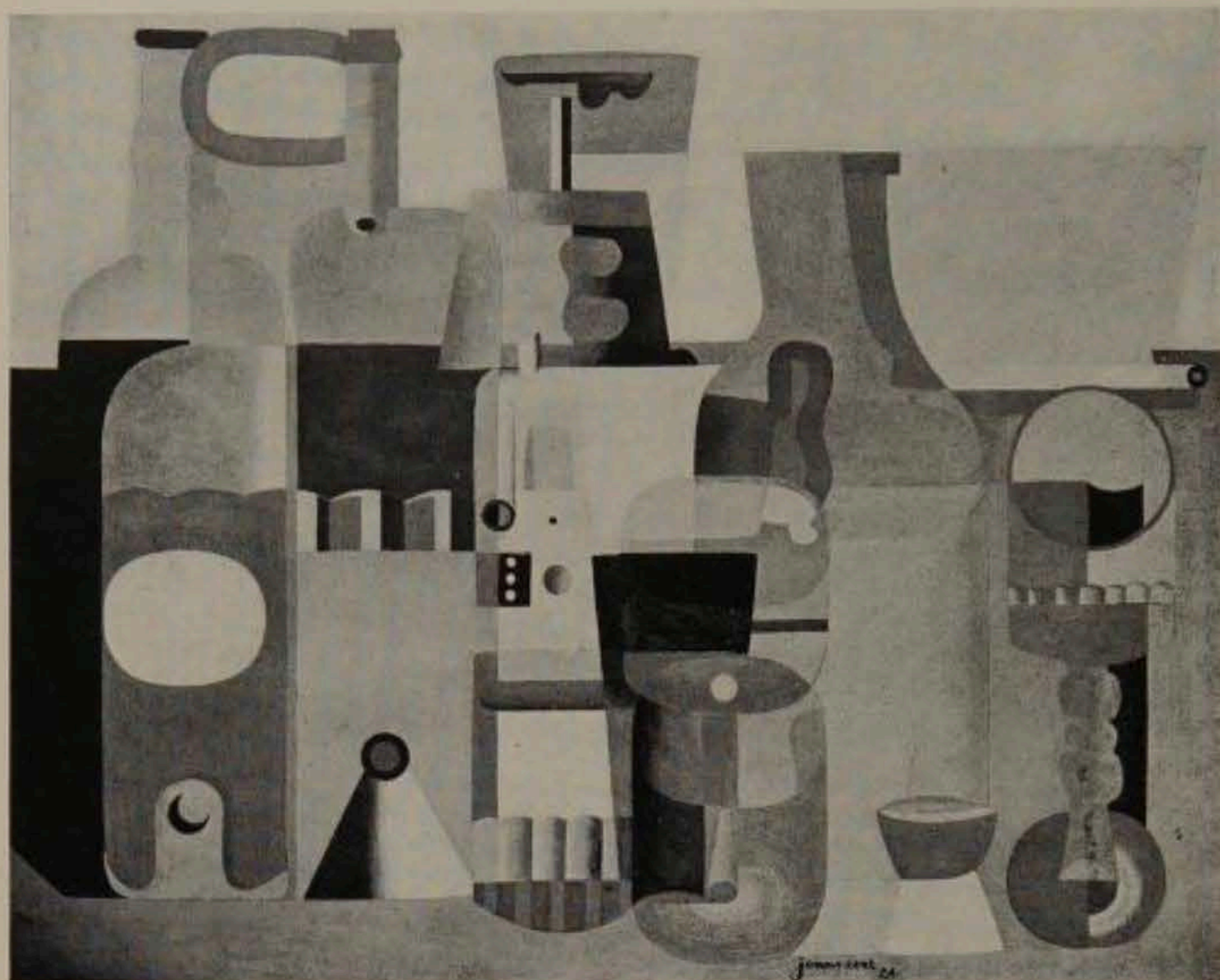
During the critical years of the Purist movement (1918-1924), both Jeanneret and Ozenfant painted commonplace objects—bottles, pipes, musical instruments, plates—which had been perfected in design by primary need and long use. Purism's forms were defined with a precision derived from machinery's dispassionate efficiency. "Modern life, with its commitment to the machine, has perfected our eye," the Purists said. Their movement therefore seemed antihumanist, superficially at least, and their most common charge against later cubism was that its lesser practitioners had granted a place to human triviality. Yet the Purists' devotion to humble subject matter was only one factor in a widespread search by advanced painters for a more direct equation between the work of art and its audience. Instead of educating the people to a level of special iconographic appreciation, the Purists proposed to dignify objects that men everywhere knew by heart. They asked of their public, not that it read Petrarch or Mallarmé before approaching their work, but that it share their reverence for an autonomous order based on simple eternal. In particular they derided the snobbism of the "artistic," and sensibility they described as springing from "the weaknesses of man."



1920. Oil painting

Opposite page: oil painting 1923 (top) and 1944 (bottom)

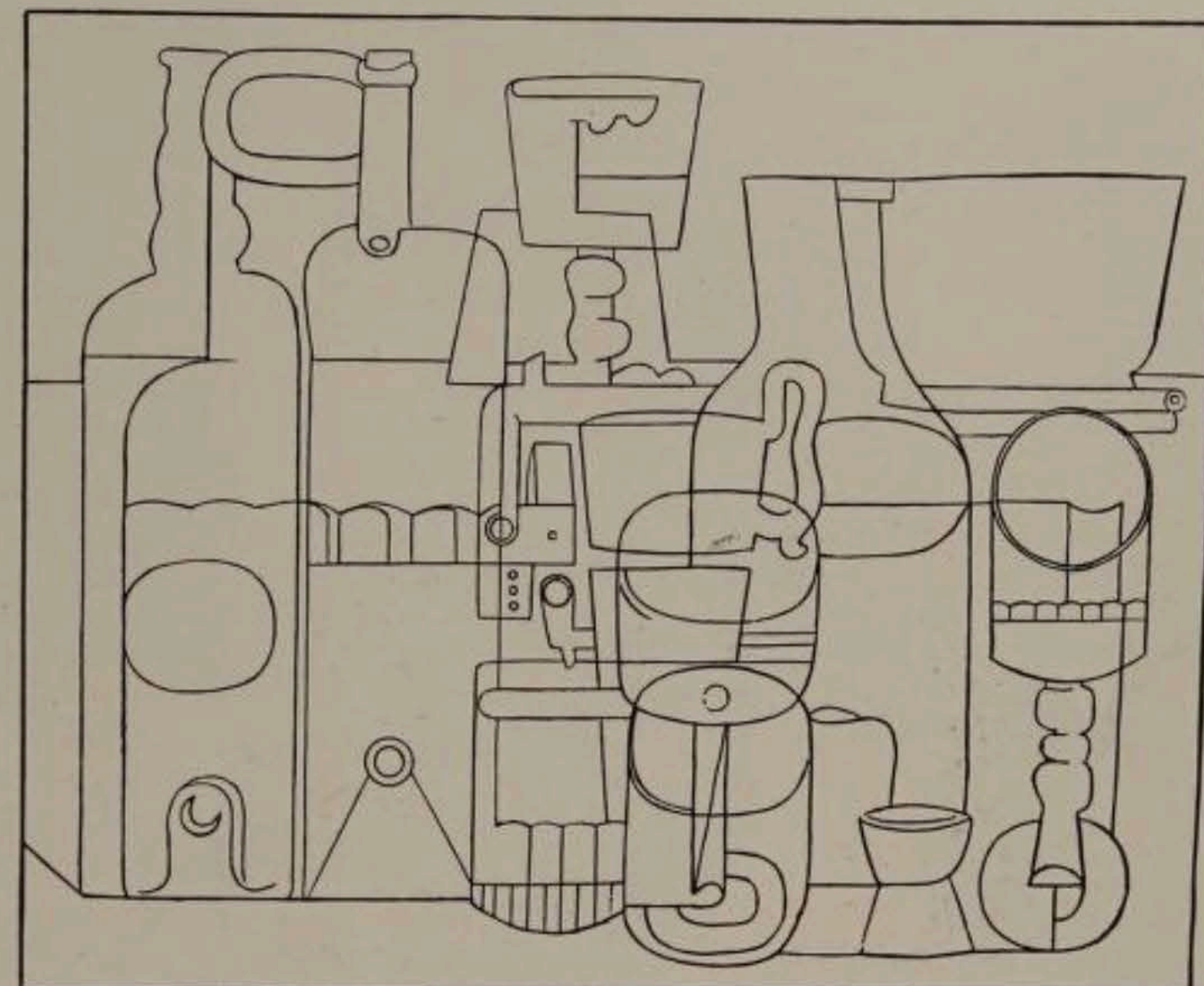




1924. Oil painting

At first the colors they most frequently used were pastel shades of pink, blue, green and red: these were precisely the colors most opposed to cubism's sombre palette; they were at the same time colors for which the Purists might presuppose a popular sympathy. Only later, when their audience was in limited degree won, did Jeanneret and Ozenfant turn to heavier, earthen tones.

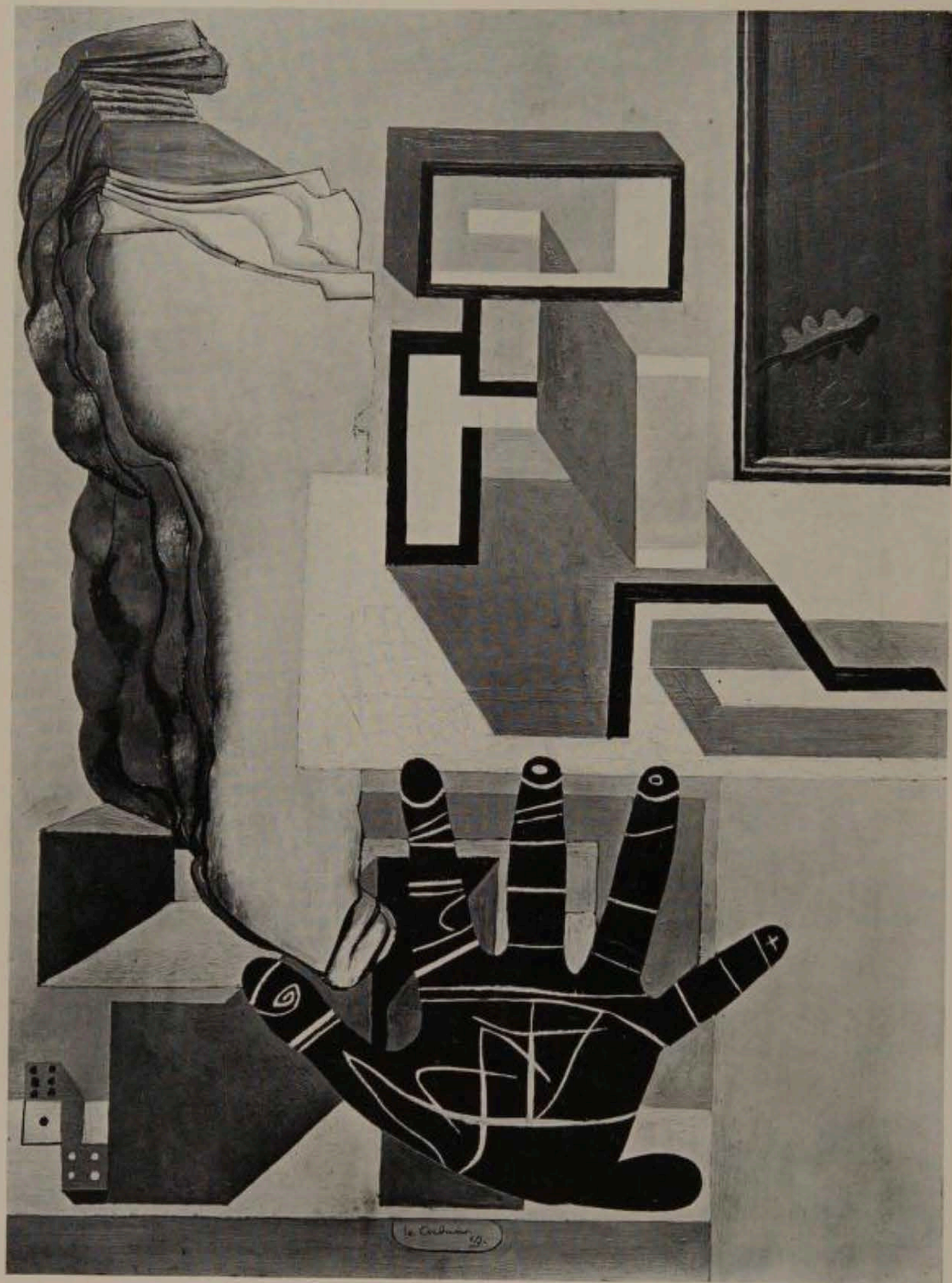
Jeanneret's part in founding the Purist aesthetic seems a logical outgrowth of his youthful experiences. As a young man he had traveled in the Balkans and the Near East, and had made sketches of strange, inaccessible places and scenes. It was perhaps through a natural, antiromantic reaction of maturity that later, as a Purist, he proposed to paint what was duplicable and near-at-hand. Moreover, a fundamental divergence between the cubists and the Purists was that the former often encircled their objects from different tangents, while the latter utilized a connecting arabesque of profile form—"marriage of objects by the same contour in common," as they put the latter in *La Peinture moderne*. Here again Jeanneret's youth offers a plausible motiva-



1924. Drawing

tion, for he had been trained as an engraver of watchcases, a trade in which the handling of the scroll was of paramount importance. Later, in architecture, Jeanneret often used scroll-like shapes, drawing them out from angular sections with unrivaled boldness and cunning. His career as a Purist painter was, of course, an integral part of his development as an architect.

Jeanneret's early Purist works (1918-1922) depicted objects in a bare, compartmental order, always frontally, but as if viewed from various elevations, so that the perspective shifted between eye level and downward-oblique, and the rounded tops of glasses and bottles were balanced by head-on silhouettes (page 116). But in 1922, the year of his architectural association with his cousin Pierre Jeanneret, he turned in *Vertical Still Life* and other works to a more complicated handling of planes. He now folded his compositions together in pleats, so to speak, and portrayed objects in tight, overlapping cross section. The tendency reached perhaps its fullest expression in the *Still Life with Numerous Objects*, here reproduced (page 117).

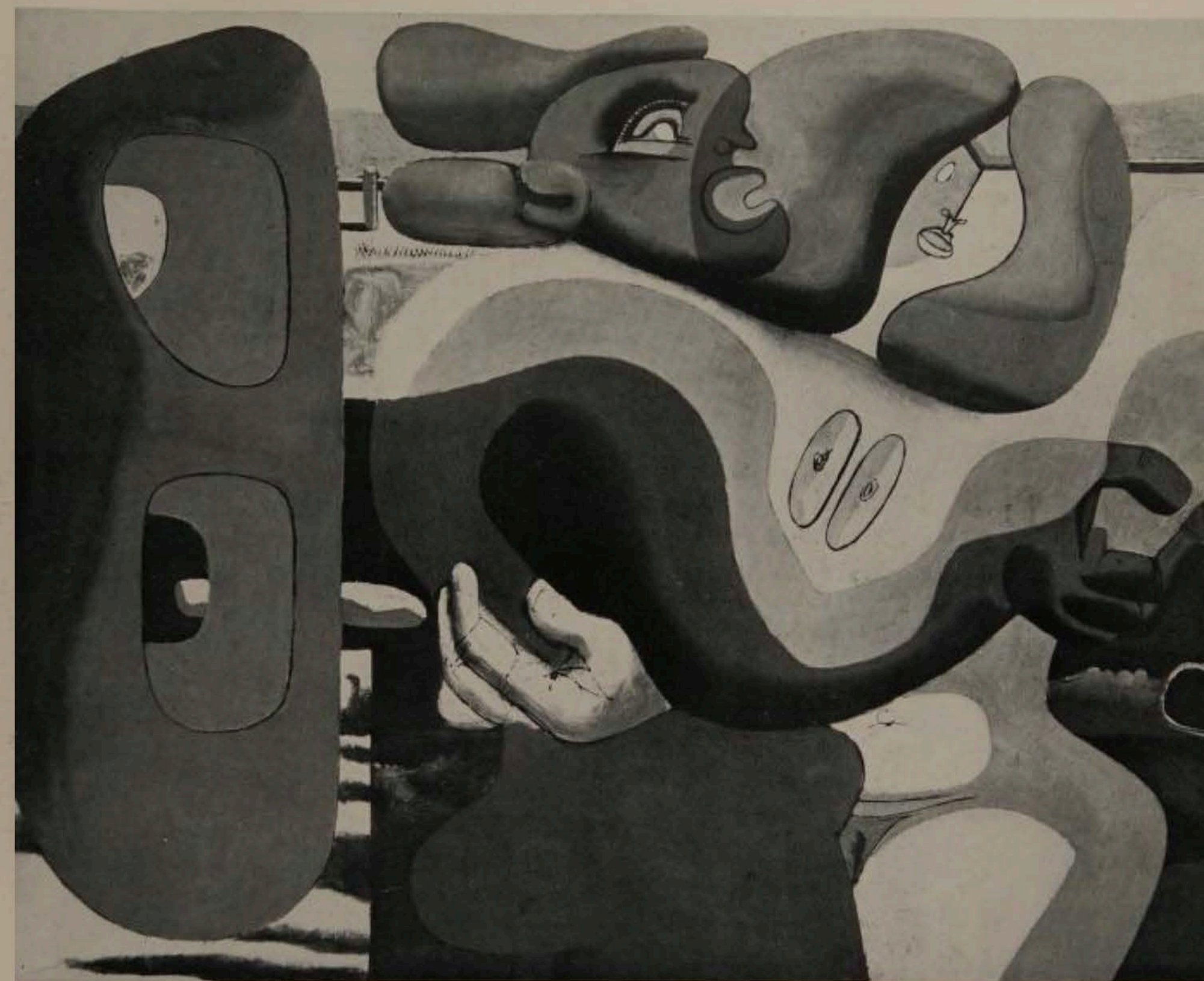
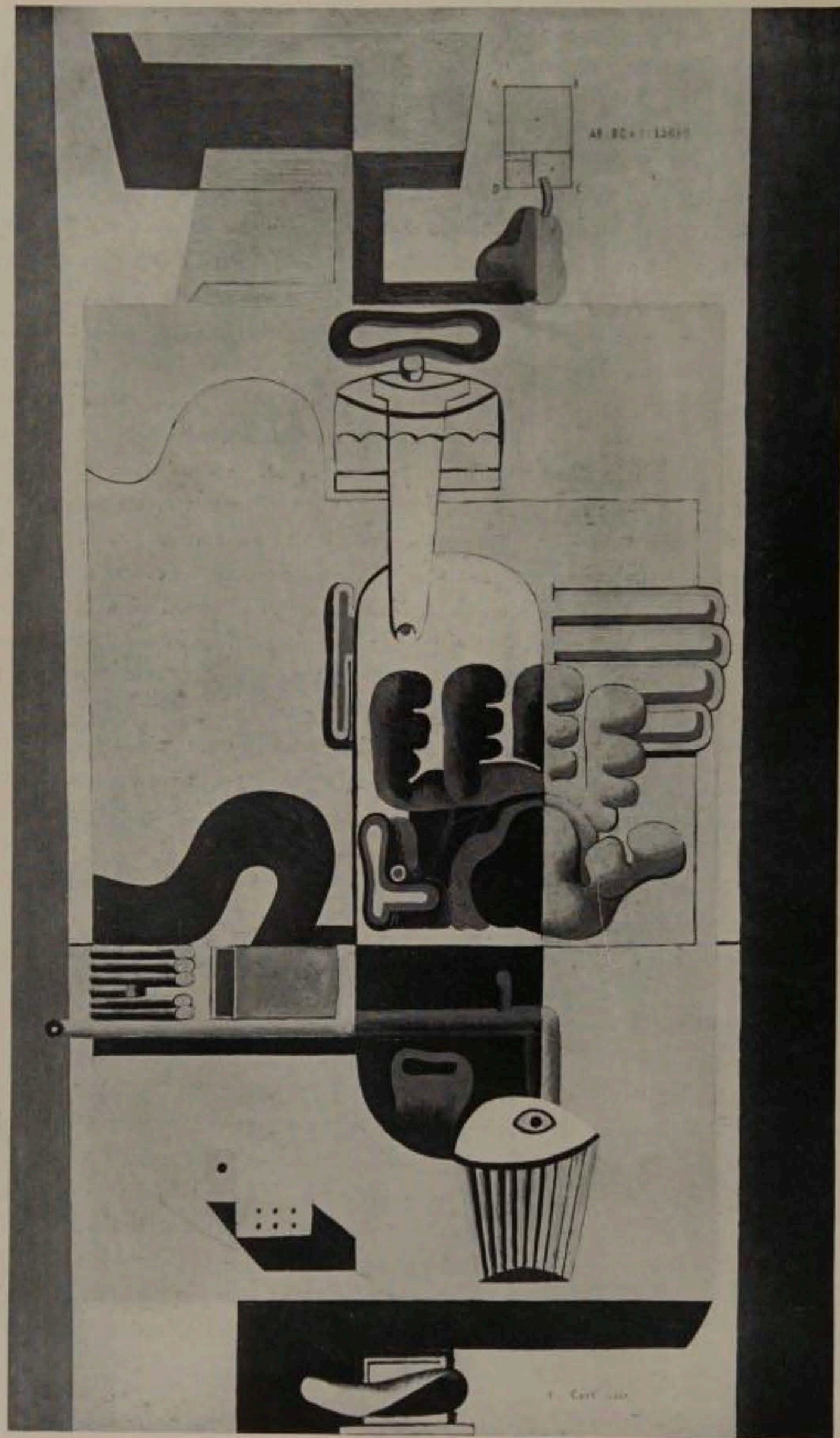


Meanwhile Jeanneret was becoming more and more active as an architect and as propagandist for the elegance and grace of functional simplicity. And in his Pavillon de l'Esprit Nouveau at the Decorative Arts Exposition of 1925, he included not only examples of industrial design, but a number of natural objects—leaves, sea shells, butterflies and stones. He thus gave point to a prophecy made in 1915 by Wyndham Lewis, one of the first apostles of machine-inspired art: "But I think a great deal of effort will automatically flow back into more natural forms from the barriers of the abstract. . . . Nature, with its glosses, tinting, and logical structures, is as efficient as any machine and more wonderful" Of course it was nature's "logical structures" that persuaded Jeanneret to complement his mechanical objects by organic equivalents. Yet, we shall underestimate his emotional range and his sensitivity to changing currents of taste, if we fail to mention his part in the revival of the "wonderful" which took its most extreme form in surrealism. Jeanneret never became a surrealist. But he, too, now admitted the validity of accidental and natural phenomena. He insisted that he found by chance the stones and sea shells in his collection; he called them "*objets à réaction poétique*." And if his architecture continued to be based on a functionalist discipline, he now sometimes painted abstracted symbols of a romantic naturalism. Like so many of his contemporaries, he felt the need of a biomorphic enrichment of content and form.

Around 1926 Jeanneret began to include the human figure in his compositions, at first confining his distortions of reality to an arbitrary mannerism of contour, as in the silverpoints here reproduced on pages 127 and 129, and eventually arriving at a tremendously dislocated, expressionist figure style (page 128). It seems safe to say that among modern painters Léger and the later Picasso were now much closer to his heart than the cubists or Juan Gris. Purism as a formal movement was in any case largely spent; *La Peinture moderne*, published in 1925, was as much its valedictory as a summary of its principles.

From 1923 until his large Zurich retrospective exhibition of 1938, Jeanneret did not show his paintings, and in 1928 he began to sign them "Le Corbusier." Both facts are of decided relevance to a study of his easel art. During his years as a Purist, he had used painting as an instrument of proclamation and as a tool for visual research. Since the late 1920's, however, painting has been for him primarily a means of emotional exploration and release. This is not to say that he has painted less seriously in recent years; on the contrary, he has perhaps devoted more time to painting than any architect since the Renaissance, and has relied on his own pictures to extend his perceptive faculties in much the same way as Miës van der Rohe, for example, has relied on those of Paul Klee. But Charles Edouard Jeanneret is now Le Corbusier, a man so cer-

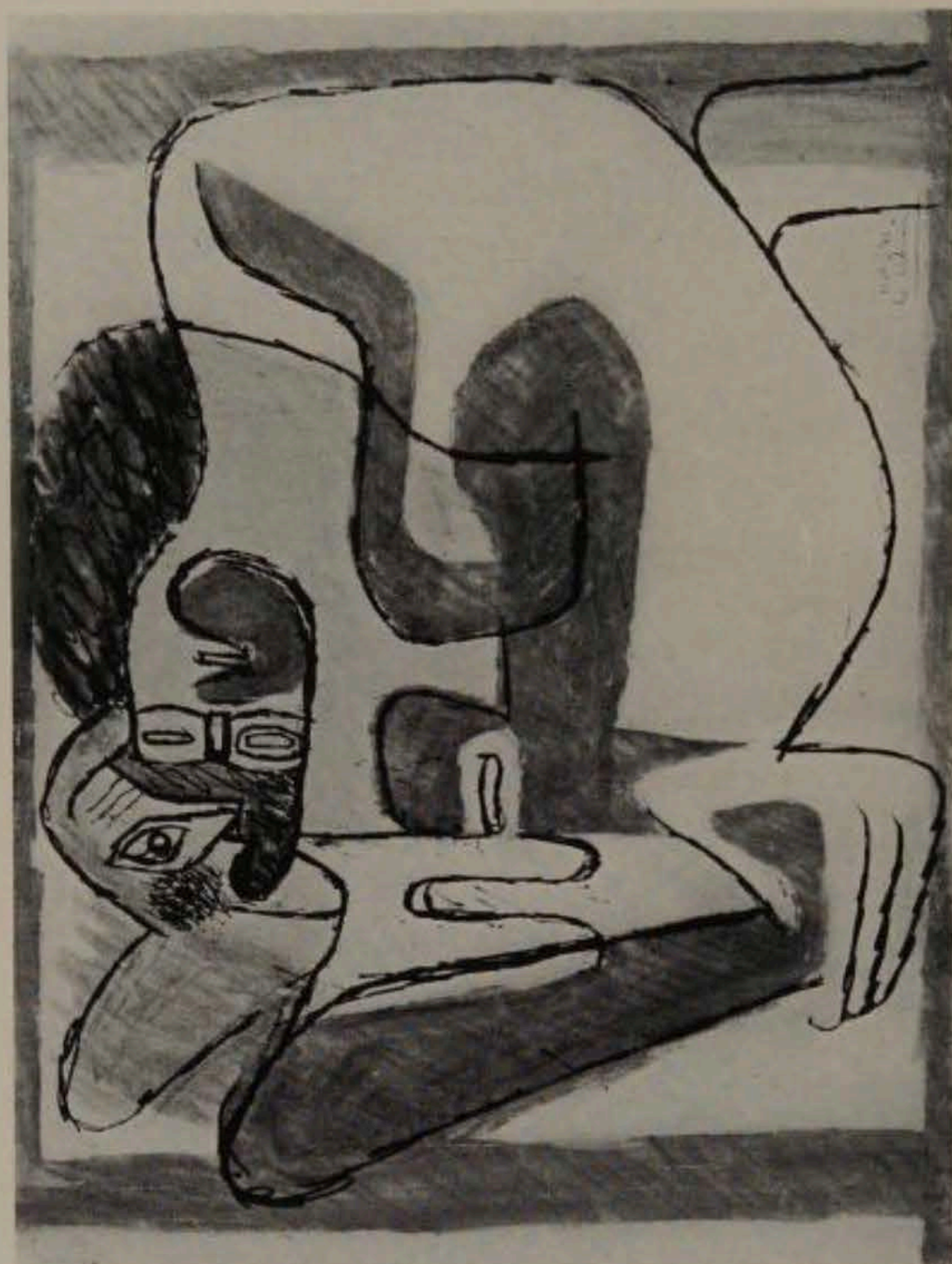
Opposite page: 1930, oil painting



1935, Oil painting
Opposite page: 1929, Oil painting



1935, Oil painting



1941, Gouache

tain of his architectural vision, so trained in its expression and control, that his painting's value to his basic career is only indirect.

We must not for this reason underrate his art's role in the steady deepening of character which has made Le Corbusier, at sixty, one of the youngest and most vigorous creative figures of our time. The torments, apprehensions, rages and violence of the past fifteen years are not reflected in Le Corbusier's architecture; for them, indeed, that architecture offers an essential curative measure. But our era's disquiet is evident in his late painting, and in its energy and desperate hope. These forces may be felt in his baroque restlessness of line, his explosive dispersal of component elements, his



1943, Oil on wood

aggressive morphology (page 125). And we must not allow Le Corbusier's architectural genius—with what certainty does one use the treacherous word!—to obscure the intrinsic qualities of his painting, now more than ever to be judged as a separate accomplishment. He is at his best, perhaps, in those mural decorations which have absorbed much of his time lately. We may miss in his recent easel art the electric touch of Picasso or the raw power of Léger, but we may still admire its real virtues of balance and movement, clarity and daring. Certainly we can but marvel at the creative richness of this man whose many gifts are bound together by a single, decisive personality.

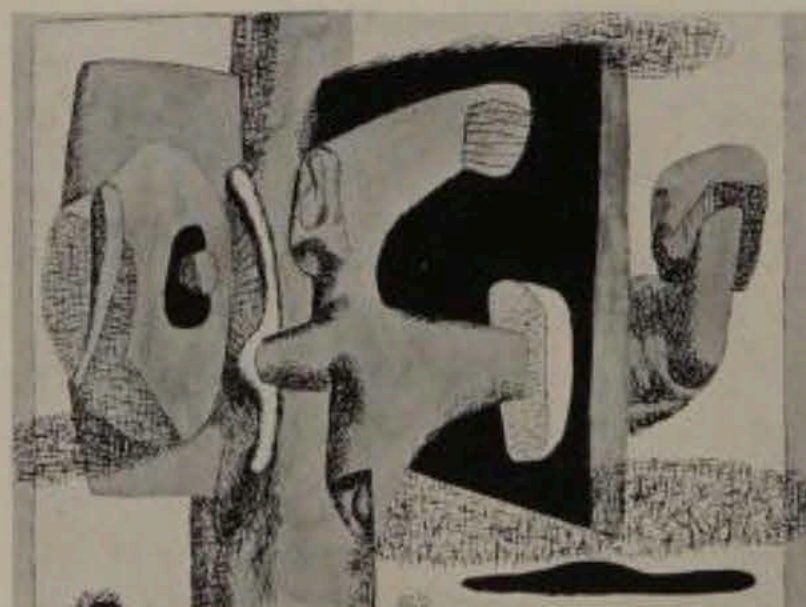


1942. Gouache
1940-1941. Gouache



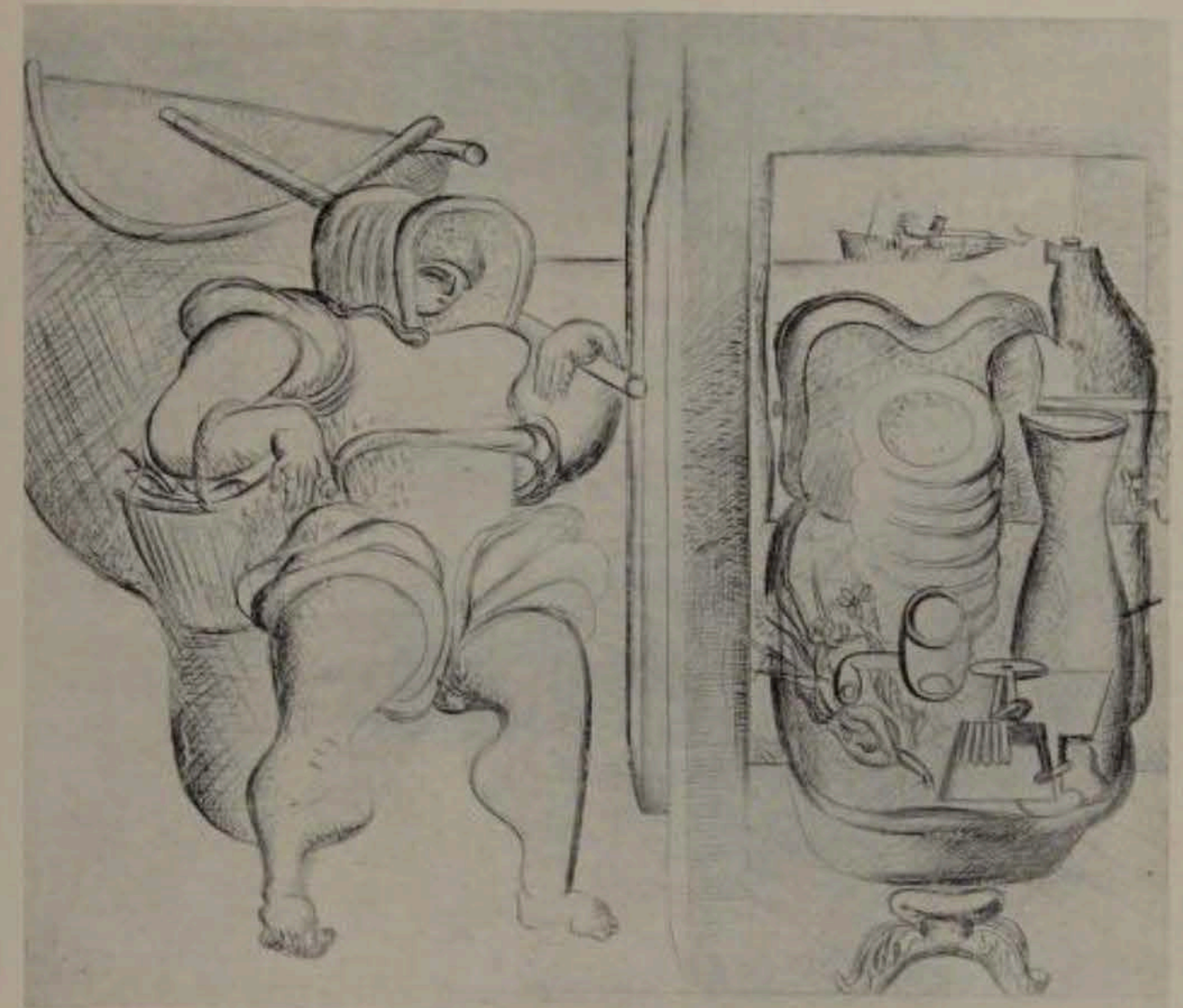
1936. Tapestry of Aubusson, Atelier of Mme. Cottoli

1928. "Washerwomen," silverpoint



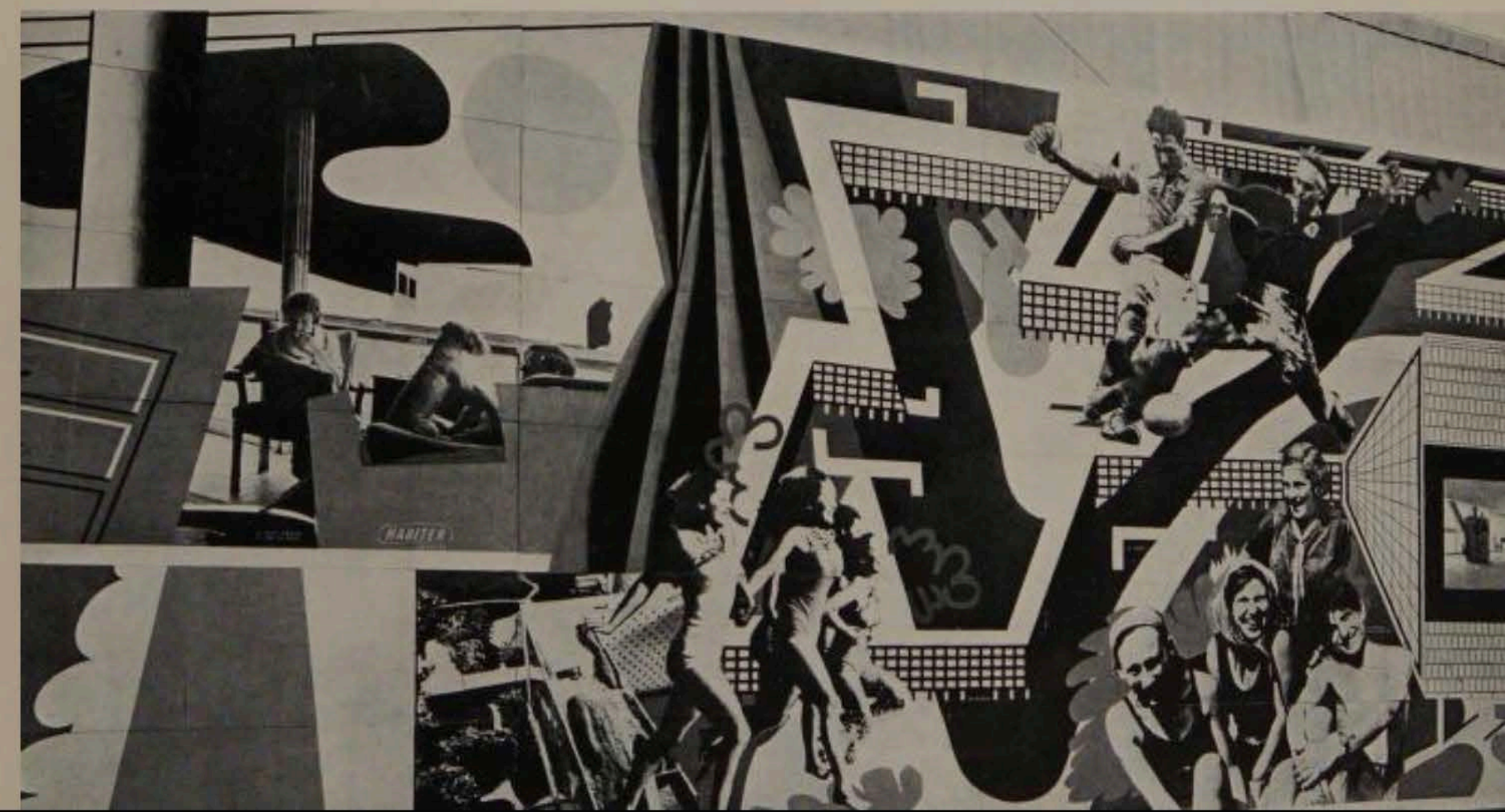


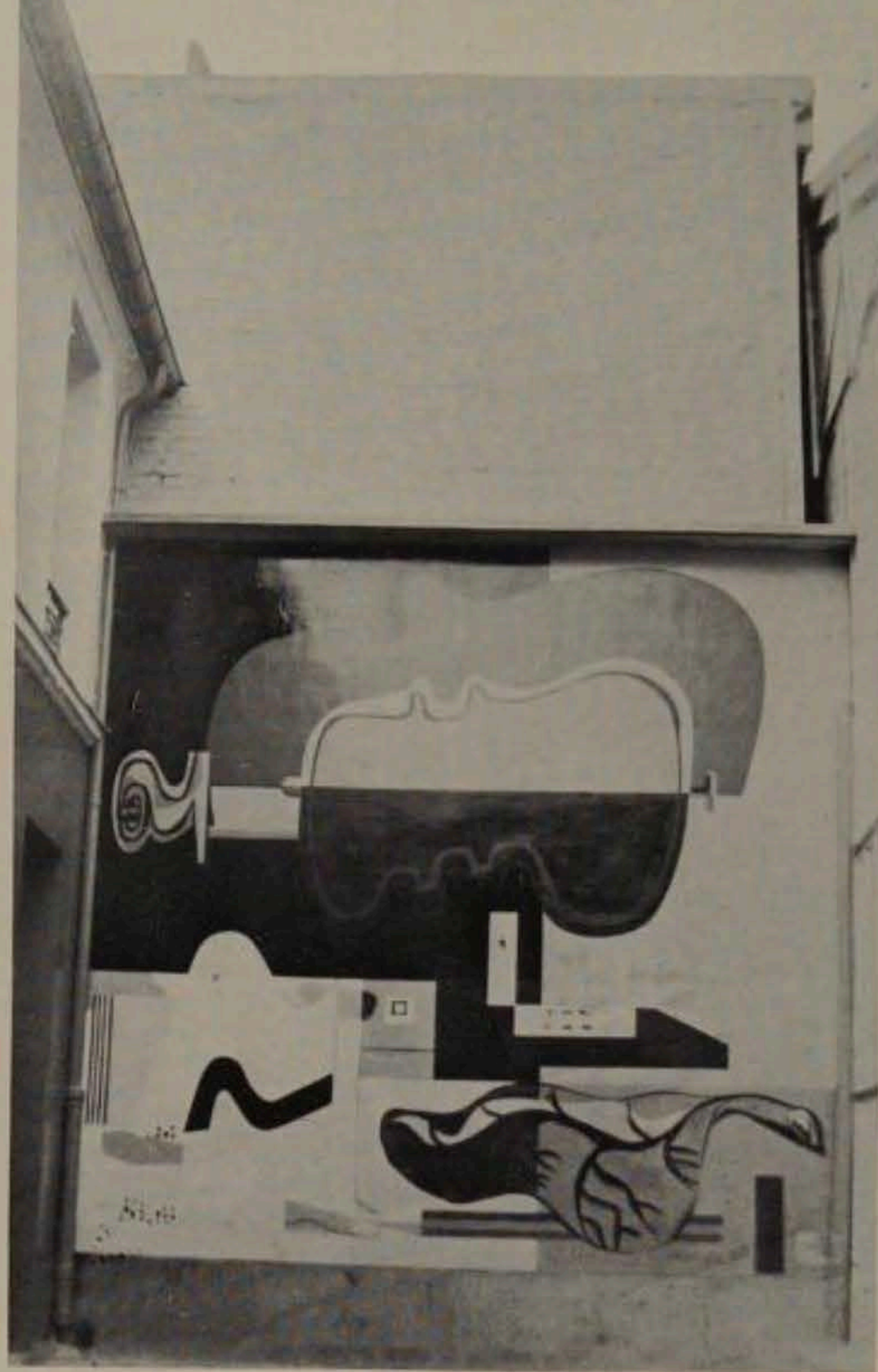
1938. Graffiti in a house at Cap Martin, 12 feet by 7.5 feet



1926. "Fisherwomen," silverpoint

1937. Photomural at the Pavilion of Modern Times, Paris. Exposition of Art and Industry.



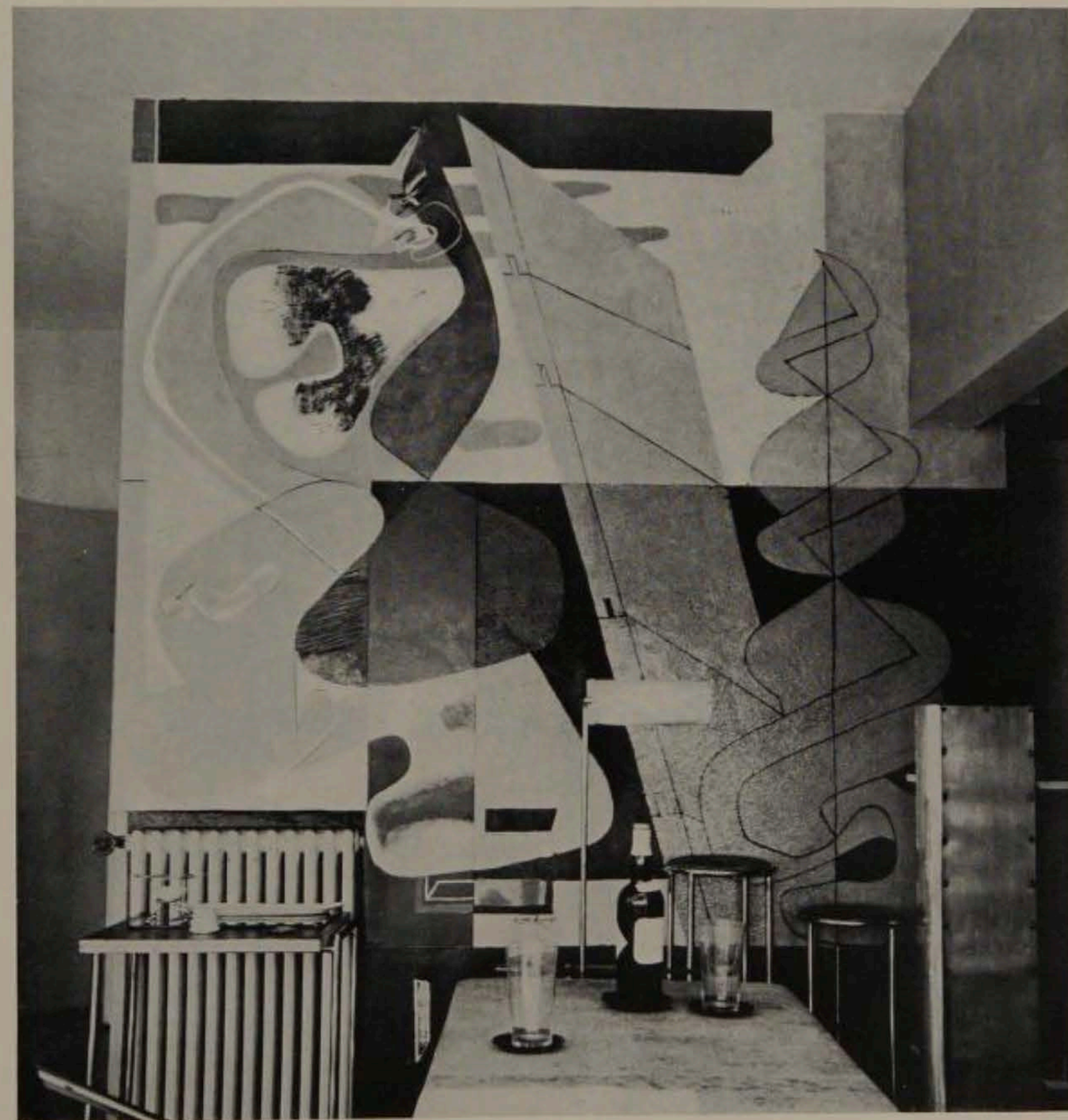


1940, Mural, Youth Club, Me-
nilmontant, Paris



1938, Mural in a house at Cap
Martin, 10 feet by 5.3 feet

1939, Mural in a house at Cap Martin

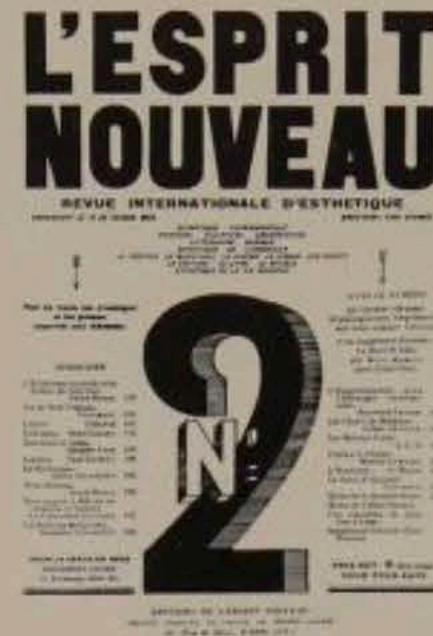


1939. Mural in a house at Cap Martin



writer

Although Le Corbusier is the author of several volumes and innumerable magazine articles, writing for him could hardly be considered as an independent activity. Unlike the architect-authors of an older generation, who were concerned with problems of morality and speculated on the destiny of man, Le Corbusier writes to clarify his technical thinking. His books are interdependent on his projects with the latter bearing the full weight of his themes. Such effort towards clarification is instrumental in the development of widely circulated slogans (the dwelling is a machine to live in) for which he is better known to the public than for his work as planner and painter. But, by writing, Le Corbusier not only succeeded in organizing his thought and formulating a planning discipline; he was able to communicate with thousands of younger technicians and guide their youthful enthusiasm towards tangible aims. This, perhaps, makes of his writings the most worthy contribution.



TOWARDS A NEW ARCHITECTURE*

let us state the problem

Let us shut our eyes to what exists.

A house: a shelter against heat, cold, rain, thieves and the inquisitive. A receptacle for light and sun. A certain number of cells appropriated to cooking, work and personal life.

A room: a surface over which one can walk at ease, a bed on which to stretch oneself, a chair in which to rest or work, a work-table, receptacles in which each thing can be put at once in its right place.

The number of rooms: one for cooking and one for eating. One for work, one to wash in and one for sleep.

Such are the standards of the dwelling.

Then why do we have the enormous and useless roofs on pretty suburban villas? Why the scanty windows with their little panes; why large houses with so many rooms locked up? Why the mirrored wardrobes, the washstands, the commodes? And then, why the elaborate bookcases? the consoles, the china cabinets, the dressers, the sideboards? Why the enormous glass chandeliers? The mantelpieces? Why the draped curtains? Why the damasked wall papers thick with color, with their motley design?

*The French original, by Le Corbusier, published 1923. From Frederick Etchells's transl., *Towards a New Architecture* (Payson & Clarke Ltd., 1927).

Nobody today can deny the aesthetic which is disengaging itself from the creations of modern industry. More and more buildings and machines are growing up in which the proportions, the play of their masses and the materials used are of such a kind that many of them are real works of art, for they are based on "number," that is to say, on order. Now, the specialized persons who make up the world of industry and business and who live, therefore, in this virile atmosphere where indubitably lovely works are created, will tell themselves that they are far removed from any aesthetic activity. They are wrong, for they are among the most active creators of contemporary aesthetics. Neither artists nor businessmen take this into account. It is in general artistic production that the style of an epoch is found and not, as is too often supposed, in certain productions of an ornamental kind, mere superfluities which overload the system of thought which alone furnishes the elements of a style. Grotto work does not make Louis Quinze, the lotus is not the Egyptian style, etc., etc.*

* From a pamphlet announcing the review, *L'Esprit Nouveau*, 1920; transl. by Frederick Etchells, 1927.

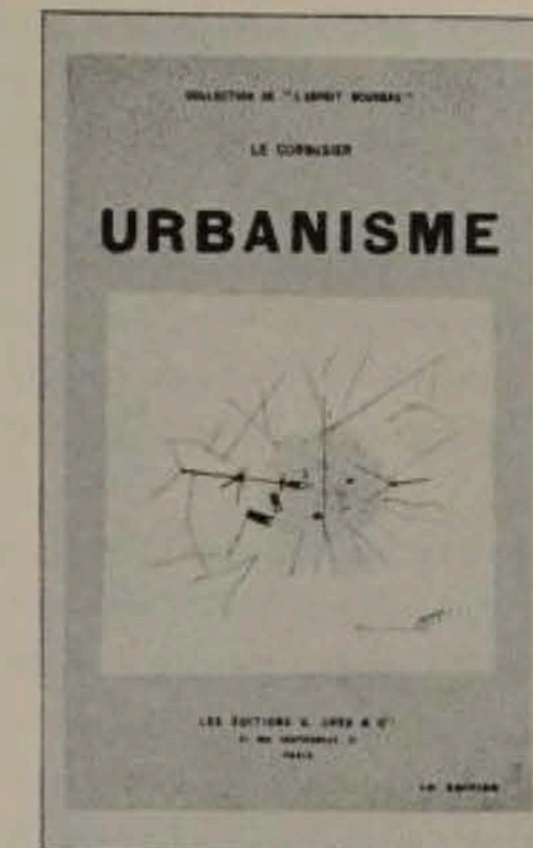
Daylight hardly enters your homes. Your windows are difficult to open. There are no ventilators for changing the air such as we get in any dining car. Your chandeliers hurt the eyes. Your imitation stone stucco and your wall papers are an impertinence, and no good modern picture could ever be hung on your walls, for it would be lost in the welter of your furnishings.

Why do you not demand from your landlord:

1. Fittings to take underclothing, suits and dresses in your bedroom, all of one depth, of a comfortable height and as practical as an "Innovation" trunk;

2. In your dining room fittings to take china, silver and glass, shutting tightly and with a sufficiency of drawers in order that "clearing away" can be done in an instant, and all these fittings "built in" so that round your chairs and table you have room enough to move and that feeling of space which will give you the calm necessary to good digestion;

3. In your living room fittings to hold your books and protect them from dust and to hold your collection of paintings and works of art. And in such a way that the walls of your room are unencumbered. You could then bring out your pictures one at a time when you want them.



A town is a tool.*

Towns no longer fulfil this function. They are ineffectual; they use up our bodies, they thwart our souls.

The lack of order to be found everywhere in them offends us; their degradation wounds our self-esteem and humiliates our sense of dignity.

They are not worthy of the age; they are no longer worthy of us.

A city!

It is the grip of man upon nature. It is a human operation directed against nature, a human organism both for protection and for work. It is a creation.

Poetry also is a human act—the harmonious relationships between perceived images. All the poetry we find in nature is but the creation of our own spirit. A town is a mighty image which stirs our minds. Why should not the town be, even today, a source of poetry?

Geometry is the means, created by ourselves, whereby we perceive the external world and express the world within us.

Geometry is the foundation.

It is also the material basis on which we build those symbols which represent to us perfection and the divine.

It brings with it the noble joys of mathematics.

Machinery is the result of geometry. The age in which we live is therefore essen-

*The French original by Le Corbusier, published 1925. From Frederick Etchells' transl., *The City of Tomorrow and Its Planning* (Payson & Clarke Ltd., 1930).

tially a geometrical one; all its ideas are orientated in the direction of geometry. Modern art and thought—after a century of analysis—are now seeking beyond what is merely accidental; geometry leads them to mathematical forms, a more and more generalized attitude.

The dwelling again puts before us the architectural problem in the demand for totally new methods of building, the problem of new plans adapted to modern life, the problem of an aesthetic in harmony with the new spirit.

The moment comes when a widespread enthusiasm is capable of revolutionising an epoch.

Such an enthusiasm inspires deeds and gives them a particular colour; in fact, it determines them.

Today, our enthusiasm is for exactitude. An exactitude carried to its furthest limits and raised to an ideal: the search for perfection.

You cannot be at one and the same time a "defeatist" and desire exactness; on the contrary, an obstinate courage is needed and great force of character. This age is no longer one in which it is possible to take things easy or to relax. It is held powerfully buttressed in action. You cannot be a "defeatist" and achieve anything at all (and stupidity and disillusionment are equally fatal); faith is necessary and confidence in the innate decency of people.

You cannot be a "defeatist" and have modern town planning as an ideal; for you will have to admit the fact that many accepted notions must be scrapped. But a time has now come when modern town planning can be conceived of as a possibility, for a widespread enthusiasm has been made dynamic by the most brutal necessities of our daily life. It is directed by a lofty desire for truth. The awakening spirit of man is already rearranging our social forms.

Fifteen years ago, in my wide travels I felt the all-powerful might of architecture, but many and difficult stages were in front of me before I could find an adequate frame for it. Much of architecture lay buried deep under meaningless and incoherent traditions which had to be dug through before any enthusiasm could be evoked, and then only to a limited degree. On the other hand, when an architecture was genuinely appropriate to its environment it gave a pleasing sensation of harmony and was profoundly moving. Only when this was so, and without recourse to text-books, did I feel the presence of one essential factor; **town planning**, a word I only learnt later.

I devoted myself to this question.

Later, I read Camillo Sitte,* the Viennese writer, and was affected by his insidious pleas in the direction of the picturesque in town planning. Sitte's demonstrations were clever, his theories seemed adequate; they were based on the past, and in fact

were the past, but a sentimental past on a small and pretty scale, like the little wayside flowers. His past was not that of the great periods, it was essentially one of compromise. Sitte's eloquence went well with that touching rehabilitation of "the home" which was later, paradoxically enough, to turn architecture away, in the most absurd fashion, from its proper path ("regionalism").

When in 1922, at the request of Salon d'Automne, I made my panorama of a City of Three Million Inhabitants, I relied only on the sure paths of reason, and having absorbed the romanticism of the past, I felt able to give myself up to that of our own age, which I love.

My friends, astonished to see me so deliberately passing over immediate considerations, said, "All this is for the year 2000!" Everywhere the journalists wrote of it as "The City of the Future." Yet I had called it "A Contemporary City"; contemporary because to-morrow belongs to nobody.

I felt and knew that the solution was at hand. And see how rapidly things have moved during the years 1922 to 1925!

In 1925, the International Exhibition of Decorative Arts in Paris demonstrated the uselessness of any turning back to the past. It marked the last and final pang before the world turns over a new leaf.

Let us admit quite simply that after the futilities of the "sublime" there must come the serious work.

Decorative art is dead. Modern town planning comes to birth with a new architecture. By this immense step in evolution, so brutal and so overwhelming, we burn our bridges and break with the past.

Recently, a young and terribly disillusioned Viennese architect maintained that the death of old Europe was imminent; only young America could feed our hopes.

"There is no longer any problem of architecture in Europe," he said. "We have crawled along so far, overwhelmed and crushed by the overcharged burden of successive cultures. The Renaissance and the various Louis styles have worn us out. We are too rich, we are blasé, we no longer have that virginity of mind which can raise up an architecture."

"The architectural problem of old Europe," I answered, "lies in the great city of today. There lies the Yea or the Nay, life or slow extinction. One or the other, but it will be Yes if we wish it. And our overweighted cultures of the past will bring us, if we wish, the perfect solution proved by every trial and test of reason and delicate sensibility."

So we may conclude in this way:

Between belief and doubt it is better to believe.

* *Der Städtebau*. English Transl. "The Art of Building Cities," Reinhold, New York.

Between action and dissolution it is better to act.

To be youthful and full of health is to have the power to produce much, but years of experience are needed to produce well.

The fact that we have been nourished by earlier civilizations enables us to disperse the clouds and to judge with clearness. It is "defeatist" to think that once one's student days are over one is nothing but a relic. Should we set out to be old? Old! The twentieth century in Europe may well be the magnificent ripening of a civilization. Old Europe is not old at all.

ARCHITECTURE AND THE ARTS*

The painting that has been transmitted to us by history is partly figurative, documentary painting. It was legitimate that this painting should be documentary for the reason that no special organism, no mechanism made it possible to do any better than the clever manipulation of the brush permitted.

Painting assumed a very special role during thousands of years: for one thing, that of constituting documentary archives or perpetuating a sermon or a speech; fixing, in more or less hermetic forms, a thought, a doctrine; making a permanent fact out of a fugitive event. But in doing this, and independently of these utilitarian tasks, painting—and this is its very foundation, its destiny—fixed figurations charged with lyricism. When painting was good, this lyricism was specifically that of forms, variable and infinitely diverse, plastic harmony. To move the sensitive heart—the wholesome hearts—to evoke poetry was then the definite aim of painting and the arts.

Today we are saturated with images. That impassive machine, the camera lens, has gone beyond the human retina. This mechanism fears neither heat nor cold; it is never tired. In consequence it has the advantage of exceptional sight to such an extent that its products are a revelation to us. They permit us to enter into the mysteries of the cosmos through investigations that our human possibilities could not hope to attain.

In consequence we are swamped with images, through the cinema as well as through the magazine or the daily newspaper. Is not, then, a great part of the work formerly reserved for painting accomplished? When an epoch is about to close, when it is animated by no collective motive, it drifts into delights of intimacy and tenderness. It is natural that at that moment painting should abound, that we should see countless painters working and living well. But let us turn the page. It had to be done one day, and today is the day. We are entering on a collective period: painting is losing part of its purpose; painters are losing their clientele. And that is the dramatic situation today, an anguish of being useless.

Let us try to see if the experience undergone by painting constitutes regression or progress. When an epoch becomes collective, or is possessed by indisputable communal needs, it then witnesses the appearance of a need to edify appropriate new systems of all kinds; and above all, there is the need to construct a new type of equipment.

* 1936, a discussion at the House of Culture (La Maison de la Culture), Paris; transl. by Maria Jolas. Published in *TRANSITION*, No. 25, Fall 1936.

It is useless to recall the significance of the mechanical revolution which took place in the last century: it has ridden over the societies of the world; it has overthrown everything, disturbed everything, molded everything. It has injured everything; but at the same time, to those who know how to read the times, it has brought a certainty of approaching release from distress and crisis.

With this marvelous instrument, which will henceforth take the place of our hands and our sweat—the machine—we will equip ourselves usefully, not only for comfort—an enormous, healthy form of comfort—but also this new period of mechanical civilization will awaken in us the joys of a maximum of individual liberty together with collective inspiration.

I will mention here some of the imminent work to be done: the equipment of our country, of all countries of the world: cities, roads, villages, farms, ports, all the places men inhabit or traverse. A gigantic activity seizing upon the entire world and placing us face to face with hitherto unsuspected tasks. This equipment opens the field of a new era to architecture. Elie Faure, placing himself on the historical plane, was able to state that in times of communal preoccupations, architecture has the floor.

And so the spirit of construction becomes our great preoccupation. It will no longer give charms of an intimate order, such as easel painting could give; it will bring the means for a new life for which the great factors at stake will be sun, nature, the culture of the body and the spirit—a sort of new selection introduced into human species. A new life and, let us imagine it, a life of physical and spiritual beauty.

But what will become of painting, of sculpture? These two major arts, it seems, should accompany architecture. Their place is there. The architecture of modern times is not only that which the reviews publishing our works show; here are only the realizations of programs made when our hand has been forced, programs of doubtful interest which, nevertheless, have made it possible to approach the study of man, of his spiritual and physical needs. It will be a new start from zero, a good cleaning up of an enormous pile of mistakes, deformations, academic laziness. What modern architecture has accomplished up till now is but trifle and trash. It is nevertheless, an accomplished revolution.

If we force ourselves to think about the great new works of modern times, we note that certain aesthetic pursuits are out of date. Other tasks present themselves on a new plane; we are entering into an epic cycle, one that appeals to the spirit of art, of course, and in consequence to the artists of spirit.

We are happy to have taken part in the startling efflorescence of the most liberating painting movement that has existed for a long time, an art movement that has brought us again in contact with the great epochs of art and thought throughout many lands and ages, which brings with it unequalled possibilities for the future at

the very moment when painting and statuary have lost the sense of style and degenerated into a bourgeois quietude—into a decadent art, nationalized through the good offices of the ministries of the beaux-arts, themselves inspired by the academies. I am referring here to the cubist movement which, with its humorous title, burst upon us like a liberation. This liberation was so powerful that I am quite willing to see in it the spontaneous and prodigious explosion that takes place somewhere in the world when, suddenly, at some spot, in some place or other, the exhaust opens and the event springs into life.

This revolutionary event took place with clarity and divination. It was the artists who flung it at the world like a bomb from the mouth of its projector. We must recognize what the arrival of cubism meant twenty years ago. It was a consequence, of course, of the labor of predecessors, a new link added to the chain of tradition; perhaps an immediate consequence of the work of a few great experimenters of the nineteenth century.

This art has been called abstract through a disquieting misunderstanding of vocabulary. (Whenever there is a question of an artistic baptism, idiotic terms are dug up, for it is always the enemies who do the baptizing.) This art is concrete, not abstract. In France this concrete quality could not escape the fate of the spiritual life of the country; that is to say, it could not escape a fundamental activity. At the core of international production, French art, called abstract, is essentially concrete. Its realism is inside. It proceeds by layers that are deep in organic equilibrium. We find again the origin, the route, the key, to each one of its elements.

And so we find ourselves in a position to use this art. In what synthesis will this be possible? As an architect and painter, I am every day freshly absorbed in the problem: Will the plastic arts be able to incorporate themselves harmoniously in the architecture of the present time with a sufficient sense of the new reality? It is no longer a question of incorporating painting and statuary in architecture, as was sometimes agreeably done at certain epochs, principally during the times of the greatest ceremony and frivolity from the Renaissance to the present.

I believe that we are entering upon an epoch that is infinitely more serious, in which we no longer have the right to “stick something on something,” but in which the pure spirit of renovation will be expressed by organisms possessing an interior mathematics, together with fixed and inalienable places where the work of art will radiate in all its power in exact concordance with the potential forces in the architectural work.

As an architect I may say that architecture is an event in itself. It can live entirely on itself. It has no need either of statuary or painting. Architecture creates shelters. These shelters answer human needs, beginning with the simple dwelling place on up through the civic, intellectual, and mystic organizations.

It has been customary, during the last twenty years, to insist that our homes have need of art and artists. There are those who feel that a dining room should be described by a basket of fruit painted or sculptured on the wall. It is my opinion that a good roast on the table takes care of that better. The home demands a great many other things that are more urgent. The tradition transmitted to us by the prints or other testimonials from the past, shows us the home life in the time of the kings, which was universally reputed luxurious. Decorations did not exist in those dwellings; the people lived in robust simplicity, which was a proof of their moral health. As for luxury, it was often of doubtful mixture. After the revolution of 1789 people wanted a bourgeois king, then a workman king.

I believe that painting and statuary will be incorporated in architecture for the reason that architecture is beginning over again at zero to reorganize everything from the skeleton through to the skin. Animating this skeleton, architecture has edified an authentic symphony through light and the manner in which this light clarifies walls; its lyricism is made of intensely real psychophysiological events, its controls are proportion. When all is ready for collaboration with the painter and sculptor it will not be with the intention of asking frivolous things of them. When we invite to our home a guest of distinction, of dignity, of real hability, and one whom we respect, we do not surround him with noise, we listen to him and he speaks amid the silence because he has something to say. In this collaboration of the major arts and architecture, dignity is not a vain pretention.

The conclusion becomes evident: such art requires distinguished personalities and distinguished temperaments. Who is prepared for this approaching task? I am afraid of the immense art production that has remained perfectly indifferent to the contemporary architectural event. I love walls, beautiful in their proportion, and I am apprehensive at turning them over to unprepared minds. For if a wall is spoiled, if it is soiled, if we kill the wholesome clear speech of architecture by the introduction of an inappropriate style of painting or statuary, if we are not in the spirit, but against the spirit—it will mean just so many disappointing crimes.

There are two ways for us to call on painting. One way is entirely utilitarian. I have noticed, little by little, that the revolution in the modern techniques of the building profession was bringing us to an astonishingly complex biology of the house. This complexity of the modern plan puts us in opposition to the classical square room we have known so far. Sometimes, as a result of the biological necessity of the plan, curved or oblique partitions are necessary. It is through polychromy that the sensational play, the colored epic, soft, violent, can be introduced into a house. Using just those organic necessities of the modern plan, I have seen that tumults can be disciplined by color, lyrical space can be created, classification realized, dimensions enlarged and the feeling

for architecture made to burst forth in joy.

This is not yet painting; it is architectural polychromy. I can, when walls overwhelm me by their presence, dynamite them with an appropriate color. But I can also, if the place is suitable, have recourse to a painter, ask him to inscribe his plastic thought in the spot, and with one stroke open all the doors to the depths of a dream, just there where actual depths did not exist.

The second way to interest painting carries with it a more concerted intention. The architect can make his composition with a priori desire to bring out, at a given moment, the great song of plastic lyricism. That, then, is a complex of exalted harmony. But the danger he would run would be the dualism of two plastic events badly tuned: architecture and heterogeneous painting.

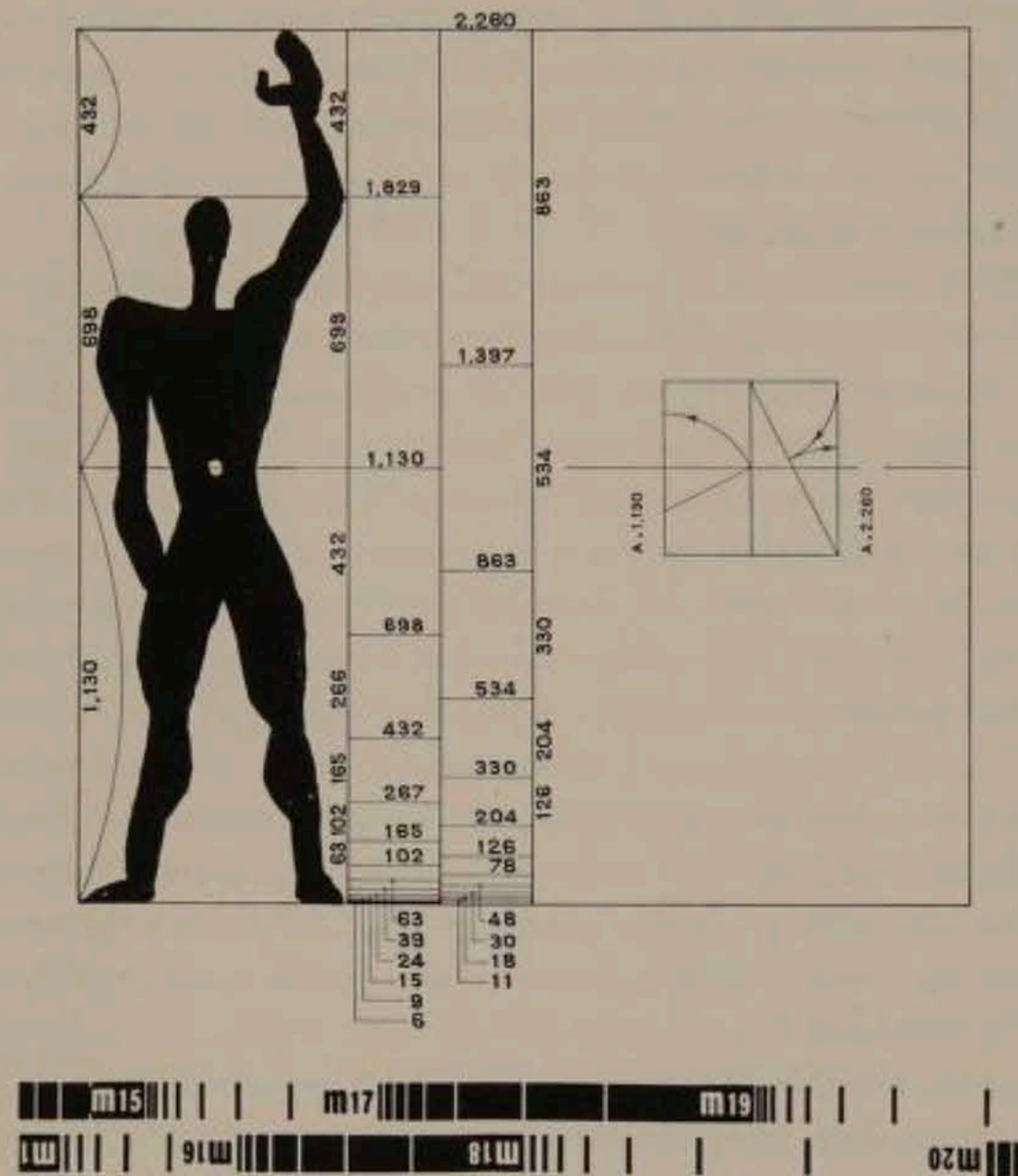
In the collaboration of mural painting and statuary with architecture envisaged, a discipline is needed, specific qualities of monumentalism and considerable preparation.

If we are at present wrongly judged in our manifestations of renovation, if the contemporary arts, painting, statuary, and even architecture, are only tolerated within certain bounds, it is because the opportunity has never been given us—and I am speaking of the small home as well as the city block—to create works whose contiguous surroundings would not be offensive. We have always been put aside in the question of site, infested with vestiges of the past—whether good or bad. We began our symphony with a proportion of 1 per cent modern spirit as opposed to 99 per cent old surroundings. There was nothing to exalt us, everything was against unity, and our continual role was to appear as heavyweights, the tough guys with the dirty, muddy boots stamping into an elegant tranquil society in order to set up our ways of thinking. And so it happened that our attitude was insolent, despite ourselves. On the day when harmony will reign in sufficient dimensions the emotion of the people, of the masses will be awakened; they will say, "It is beautiful."

We do not ask the man of the people to be familiar with the detours in the action that has brought about the result; but he will feel the harmony, the power, the clarity which we will have put there. When favorable circumstances will finally make it possible to rid ourselves of the depressing throwbacks which are the style today; when people will have ceased to look backward, to base their convictions on the Renaissance or the splendors of other days—many of which in fact might be disputed—we will then be sure, by keeping ahead and constructing things that go together, of provoking an enthusiastic unanimity.

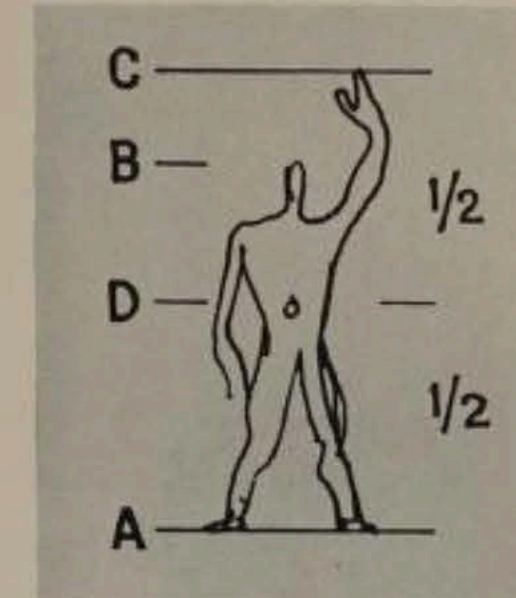
APPENDIX

FROM MAN AS A MEASURE AND FROM THE NUMBERS AS A MEASURE: THE MODULOR,*
DEVELOPED BY LE CORBUSIER, IS A SCALE FOR HARMONIC MEASUREMENT OF SPACE.

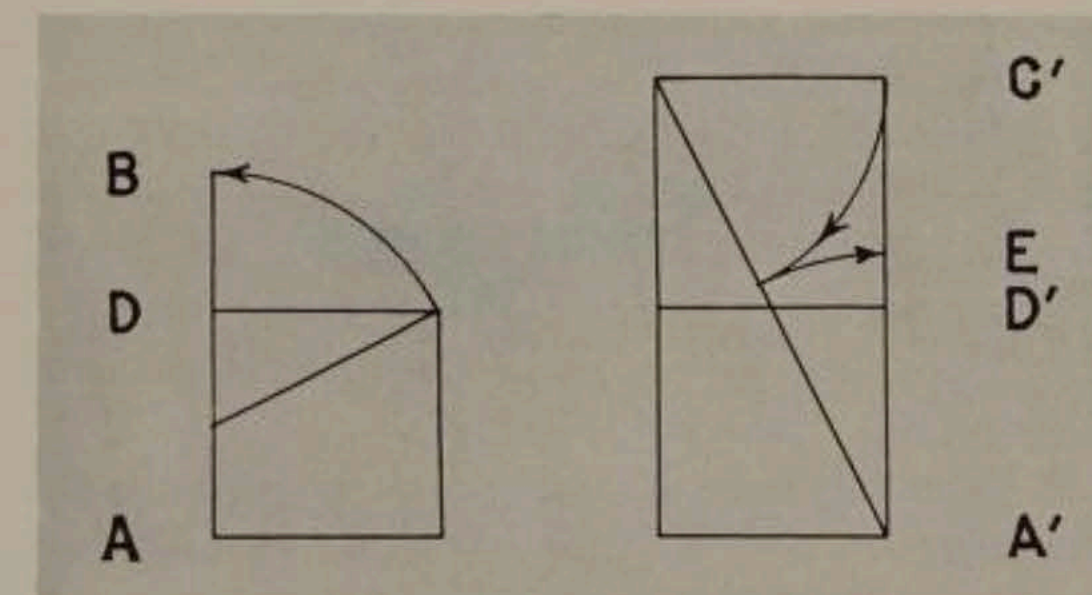


The human figure produces the elements from which are determined two Fibonacci series; the RED series (left), taking its base value from the height of a standing man, and the BLUE series (right), taking its base value from the height of a standing man with arm upraised. Together or separately the two series can be used as an instrument of proportional measurements. The diagram at the right recalls the two progressions determined by the golden mean: magnitude extended by the golden mean, and magnitude reduced by the golden-mean. Below the diagram, a fragment of the Modulor tape.

* In 1947 Durisol Inc., New York, undertook the development of Modulor in the form of a graduated tape.



The human body is a manifestation of a rule of harmony. Three essential points, the solar plexus, the top of the head and the extremity of the fingers when the arm is raised, are in mean and extreme ratio (golden mean) and can be translated into an infinite series of proportions, increasing or diminishing, known as the Fibonacci series, in which D is the golden mean of AB, B is the golden mean of DC, and AD is the equivalent of DC.



$$A'D' = D'C'$$

$$BD/AD = AD/(AD + BD)$$

AD is the given value, BD is its golden mean complement. $C'E/EA' = EA'/A'C'$ in which $A'C' = 2[AD]$, the double of the given value AD, and EA' is the golden mean of $A'C'$. Thus the given value, its double and the golden mean are intimately linked together.

BIOGRAPHICAL NOTES

The Greek term "symmetry" or "commodulation" at the time of the Renaissance meant the correlation that should exist between the elements and the whole and between the elements themselves; it was the result of harmonic or rhythmic proportions. Systems of proportions are to be found in the works of Egyptian and Greek architects, of Vitruvius, of the master builders of Gothic cathedrals, of Leonardo, of Palladio, down to the time of the French Revolution and the abolition of the guilds. There were many systems; each important building had its own to master its particular space requirements. Le Corbusier introduces a system of harmonic proportions for universal use. The Modulor can be applied to all problems requiring visual control, from the design of a small object to a section of a city.

Le Corbusier's interest in the problem of architectural proportions was an early one; the façades of his house at Nancy, built in 1916, were developed through a system of diagonals regulating the structural heights and widths. From his long experience as an architect and painter he acquired the certainty that design based upon the "meter," which is an abstract notion with no relation to man, was unduly handicapped. The results are often arbitrary, particularly if the designer is a less experienced man. On the other hand, the foot-and-"thumb" system, while retaining its origin from the human body, is not sufficient to produce an harmonic scale. By taking the proportions inherent in the human body, by applying two elementary operations from the realm of numbers (addition and subtraction), and by giving to the human body an average value, Le Corbusier develops two Fibonacci* series of *proportions* which constitute the gradations of Modulor; they tend toward zero and toward infinity.

However, the Modulor, in order to serve its purpose, does not include gradations so small that they cannot be perceived by the naked eye, nor so long that they cannot be seen as a single image. For a wide range of application which goes from product design to town planning the Modulor has fifty-four harmonic measurements or gradations. The shortest gradation equals one-twentieth of an inch and the longest equals 1,475 feet. The variety of combinations of these fifty-four measurements in groups of three is practically limitless.

*Filius Bonacci, surname of Leonardo of Pisa who rediscovered in 1022 the tenth Pythagorean series of proportions which are found in the human body as well as in plants and particularly in the distribution of branches, leaves and seeds (phyllotaxis).

- 1887 Charles Edouard Jeanneret, born October 6, in La Chaux-de-Fonds, Switzerland, famous for watch industry. Father a watchmaker, mother a pianist.
- 1900-1903 Apprentice to an engraver in La Chaux-de-Fonds.
- 1905-1906 Studies drawing and painting under L'Epplatennier at the local school of art. Designs and builds three houses during this period.
- 1907 Travels in Italy, visits Budapest and Vienna where he meets Hoffmann.
- 1908-1909 Studies in Paris for thirteen months under Auguste Perret, then famous for his reinforced concrete constructions.
- 1910-1911 Works for five months under the architect Peter Behrens, Berlin, and studies contemporary arts and crafts movements (Werkbund) in Germany. Visits Austria and works under Hoffmann.
- 1912 Travels through Bohemia, Serbia, Rumania, Bulgaria, Turkey, Asia Minor, Greece and Italy.
- 1913 Back at La Chaux-de-Fonds, teaches and works with L'Epplatennier.
- 1916 Exhibition of water colors at the Kunsthaus, Zurich.
- 1918-1919 Returns to Paris, meets Ozenfant, beginnings of the Purist movement in painting. First exhibition of oils, signed "Jeanneret," with Ozenfant at the Galerie Thomas.
- 1920 Founding of L'ESPRIT NOUVEAU, an "International Magazine Devoted to Contemporary Aesthetics"—architecture, literature, painting, philosophy. Founders: The poet Paul Dermée, Amédée Ozenfant and Le Corbusier. The title inspired by a writing of Guillaume Apollinaire. "Le Corbusier" pseudonym derived from name of a maternal grandparent, used for the first time; other pseudonym appearing in the magazine: "Paul Boulard." Pseudonyms "Vaucressy" and "Fayet" used by both Ozenfant and Jeanneret.
- 1921 Exhibition of paintings at Druet Gallery, Paris.
- 1922 Association with Pierre Jeanneret, his cousin. Establishes office at 35 rue des Sèvres which becomes a center for young architects and city-planners from every part of the world.
- 1923 Exhibition of paintings at Léonce Rosenberg Gallery, Paris.
- 1927 Awarded first prize at the international competition for the Palace of the League of Nations. Intrigues prevent his receiving building contract. Lectures in Madrid, Barcelona, Frankfurt.
- 1928 Begins signing his paintings "Le Corbusier." Travels and lectures in U.S.S.R.
- 1929 Founding of the International Congresses for Modern Architecture at the Château de La Sarraz, Switzerland. Honorary degree Doctor of Philosophy, University of Zurich. Lectures in Buenos Aires, Montevideo, São Paulo, Rio de Janeiro.
- 1930 Coeditor of magazine PLAN.
- 1933 Coeditor of magazine PRELUDE. Lectures in Stockholm, Oslo, Göteborg, Barcelona, Algiers, Athens, Zurich.
- 1934 Lecture tour in Italy.
- 1935 Lecture tour in United States. Exhibition at the Museum of Modern Art, New York.
- 1936 Trip to Brazil. Plans for the Ministry of Education and Health with a group of Brazilian architects.
- 1938 Named member of the Regional Planning Commission of Algiers. Serious accident forces him into inactivity for several months.
- Retrospective exhibition of paintings at the Kunsthaus, Zürich.
- Exhibition of paintings at the Gallery of Balla et Carré, Paris.
- 1943 Founding of ASCORAL (Assembly of Builders for an Architectural Renewal).
- 1945 Appointed with seven others to the French Supreme Council on City Planning; traveling exhibition of photographs of architectural work and paintings by the American Federation of Arts.
- 1946 Visits United States on a technical mission. Appointed delegate from France to the Headquarters Committee of the United Nations.
- 1947 Appointed member of the board of architectural advisers for the buildings of the United Nations. Exhibition of paintings and architecture, Amsterdam.

LIST OF MAJOR PROJECTS AND CONSTRUCTIONS

- 1914-1915 Project for the Domino houses, factory-made independent frame.
 1916 House at Nancy. Reinforced concrete frame and curtain walls.
 1917 Project for slaughterhouses at Challey and Garches.
 1922 Project for a "Contemporary City for 3,000,000 Inhabitants," model exhibited at the Salon d'Automne.*
 Project for Citrohan houses on stilts with factory-made elements.
 Studio for Amédée Ozenfant.*
 House at Vaucresson.
 1923 Houses for La Roche and Albert Jeanneret, at Auteuil, Paris. Stilts, roof gardens, modular elements.
 Housing at Pessac, near Bordeaux.*
 1924 Studios for Jacques Lipschitz and Mietschaninoff at Boulogne sur Seine.*
 1925 Pavilion of the New Spirit at the Exposition of Decorative Arts in Paris.*
 Plan Voisin of Paris.*
 Two studies for the Meyer house, at Neuilly-sur-Seine.
 1926 House Ternisien in Paris.
 People's Palace for the Salvation Army, Paris.
 The Cook House, Boulogne-sur-Seine.
 House Guiette, Brussels.
 House Planeix, Paris.
 Project for the Palace of the League of Nations.*
 House at Garches.*
 1927 Three houses at Weissenhof-Stuttgart for the Werkbund Exposition.*
 Three buildings on the Church property, Ville d'Avray.
 1928 House at Carthage.
 Clarte Apartment at Geneva.*
 Palace of Centrosoyous at Moscow.
 1928-1930 Savoye-House at Poissy.*
 Floating Shelter for the Salvation Army, Paris.
 Project for the Draeger printing plant, Paris.
 Project for the Mundaneum, international cultural center in Geneva.
 Competition for the arrangement of the Porte Maillot, Paris.
 1929-1931 Dormitories for the Salvation Army.*
 Interior equipment, Salon d'Automne, Paris.*
 Project for the city of Rio de Janeiro.*
 1930 House Erraguriz, Chili.
 Summer house of Mme. de Mandrot, at Le Pradet.*
 Apartment of Beistegui, Paris.
 1st project for a "Radiant" City.*
 1931-1933 Dormitory building for the Swiss students at the University City, Paris.*
 Participation in the limited international competition for the design of a Palace of The Soviets.*
 New studies for the Palace of the League of Nations.
 Project for an apartment house in Zurich.
 First studies for the planning of Algiers.*

Projects marked with asterisk are included in this volume.

- 1932 Plans for the Saint-Gervais section of Geneva.
 Project for a residential development at Oued-Ouchaia, near Algiers.*
 Project for an apartment house in Algiers.*
 Apartment house at Boulogne-sur-Seine.*
 1933 Plans for the Norrmalm section of Stockholm; application of the Radiant City principles.
 Plans for the development of the left bank of Antwerp.*
 Plans for the business center of Algiers.
 Project for a building for the General Swiss Life Insurance Company, Zurich.
 1934 Week-end house in a western suburb of Paris.
 Summer house at Mathes.*
 Plans for the marine section of Algiers.
 Projects for the Radiant Farm and the Radiant Village.*
 Project for the International Exposition in Paris, 1937; a residential unit for 4,000 inhabitants.
 Plan for Nemours.*
 Plan Macia for Barcelona.
 Project for low-cost housing in Barcelona.
 Project for low-cost housing in Zurich.
 Project for an apartment house at the Esplanade des Invalides in Paris.
 Second project for the International Exposition in Paris, 1937: a Museum of Knowledge.
 1935 Interiors at the Brussels Exhibition.*
 Project for an apartment house in Montmartre.
 Project for a prefabricated house.
 Study for the standardization of the Bata shops.
 Competition for the City and State Museum at Quai de New York, Paris.
 Planning for the town of Zlin.
 1936-1937 Pavilion of Modern Times at the International Exposition of Art and Industry, Paris, 1937.*
 Project for the University City of Rio de Janeiro.*
 Planning of the town of Hellocourt.
 Study for an automobile "Maximum."
 1937 Bata pavilion at the Paris Exposition.
 Plans for Slum Section No. 6 in Paris.*
 Plan of Paris, 1937.*
 Layout for the International Exposition of Liège
 Project for a people's recreation center for 100,000 participants.*
 1938 Project for an office building in Algiers.*
 The "Growing" Museum.*
 Master plan for the city of Buenos Aires.
 Urbanization of the approaches of Saint-Cloud.
 Project for the museum of Philippeville.
 Project for the French pavilion at the International Exposition of Liège.
 1939 Temporary barracks for refugees.
 Project for the planning of the Place de la Mairie, at Boulogne-sur-Seine.
 Planning for the valley of Vars (winter sports).
 Project for the oceanographic laboratory of Roscoff.
 Project for a monument to Vaillant Couturier.*
 1940 Gallery of Arts, Exposition of Overseas France, Paris.
 Cartridge factory at the department of Creuse: application of the "green" factory.*
 Murondin buildings.
 1942 The Linear Town.*
 1945 Project for the reconstruction of the town of Saint-Dié.*
 Project for the town of La Rochelle-La Palisse.
 Residential unit for 1,500 people at Marseilles.
 1947 Final development of Modulor, an harmonic scale.*
 Preliminary work on buildings for the United Nations Headquarters.

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